ALL SAINTS'
CATHOLIC VOLUNTARY ACADEMY

Year 11 Absolutes

Opportunity . Achievement . Success

Vocare House

Term 2 2025-26

NAME:
FORM:

Half Term 3 – Popular Culture Theme 2 / Customs, Festivals and Celebrations

Quiz 3.1 – Zeit zum Feiern

am Heiligen Abend	On Christmas Eve
am Weihnachten	At Christmas
der erste Weihnachtstag	Christmas Day
zum Geburtstag	For my birthday
Karneval	Carnival
Neujahr / Silvester	New year / new year's eve
der Feiertag / die Feier	Bank Holiday / the celebration
Am Ostern	At Easter

Quiz 3.2 – Welches Fest ist das?

Wir feiern meinen Geburtstag am…	We celebrate my birthday on…..
Am Silvester gibt es viele Feuerwerke	On New Year's Eve there are lots of fireworks
Ich freue mich auf Weihnachten	I'm looking forward to Christmas
Am Heiligen Abend geht man in die Kirche	On Christmas Eve you go to church
Karneval ist ein traditionelles Fest	Carnival is a traditional celebration
Dieses Fest hat immer eine tolle Stimmung	***This celebration always has a great atmosphere***

Quiz 3.3 – was mache ich?

Ich verkleide mich	I get dressed up
Ich öffne meine Geschenke	I open my presents
Ich feiere eine kleine Party mit meinen Freunden	I celebrate a small party with my friends
Ich mag die Überraschung!	I like the surprise
Ich backe immer einen Kuchen	I always bake a cake
Wir schmücken das Haus	We decorate the house
Ich mache immer, was ich will	***I always do what I want***

Quiz 3.4 – was hast du gemacht?

Ich habe Freunde eingeladen	We invited friends
Ich habe mit Familie gefeiert	I celebrated with family
Ich habe Geschenke bekommen	I got presents
Wir hatten ein Familienfest	We had family celebration
Wir haben leckeres Essen gekocht	We cooked delicious food
Es hat mir sehr gut gefallen	***I really liked it***

Quiz 3.5 – was wirst du machen?

Ich werde eine Feier organisieren	I will organise a party
Ich will zusammen mit Familie feiern	I want to celebrate together family
Ich möchte viele Geschenke bekommen	I would like to get lots of presents
Vielleicht werde ich Freunde einladen	Maybe I will invite friends
Es wird sehr lustig sein	It will be very funny
Wenn ich die Wahl hätte, würde ich + inf	***If I had the choice I would..***

Model answers

Example 90 word task: You are writing about festivals that you celebrate. Write approximately 90 words. Describe - ***What festivals are celebrated in your culture*** - ***How you celebrated last Christmas*** - ***What are your plans for your next birthday***	Wir feiern viele Feier. **Zum Beispiel** feiern wir Weihnachten, Ostern und Neujahr. **Meiner Meinung nach** haben diese Feier immer eine gute Stimmung, **weil** wir tanzen und mitsingen. **Außerdem** am Neujahr gibt es Feuerwerke und Bratwurst!!! **Jedoch** ist das Wetter manchmal sehr schlecht. Letztes Jahr habe ich Weihnachten mit meiner ganzen Familie gefeiert **denn** ich verstehe mich sehr gut mit meinen Eltern und Geschwistern. **Ich denke, dass** wir viel lachen und viel Spaß haben. Ich habe Geschenke bekommen, **zum Bespiel** Geld und Bücher. Am ersten Weihnachtstag haben wir zusammen gekocht und **daher** habe ich zu viel gegessen! Nächstes Jahr zum Geburtstag werde ich vielleicht Freunde einladen, oder wir werden in die Stadt gehen, **um** frische Luft **zu** schnappen. **Ich hoffe**, viele Geschenke **zu** bekommen, **da** es spannend ist!

Example 150 word task: You are writing an article about celebrations in your country Describe *what is your favourite celebration *something you celebrated recently	**Ehrlich gesagt** ist mein Lieblingsfest Weihnachten, **besonders** der erste Weihnachtstag, **weil** ich immer mit meiner Familie bin. Normalerweise öffne ich meine Geschenke denn ich liebe die Überraschung!! **Zum Beispiel** letztes Jahr habe ich neue Schuhe und Konzertkarten bekommen **daher** war ich sehr zufrieden! **Außerdem** finde ich Weihnachten wirklich schön, **da** wir leckeres Essen kochen und wir essen sehr viel **jedoch** ist das Essen eine Kalorienbombe! **Nachdem wir das gemacht haben**, gehen wir im Wald spazieren, **um frische Luft zu schnappen,** was ich **empfehlenswert** finde! Neulich habe ich meinen Geburtstag gefeiert, **wo** ich meine Großeltern eingeladen habe und wir hatten ein Familienfest im Garten, **da** das Wetter herrlich war. Wir haben Fisch und Fleisch gegrillt und Spezi und Bier getrunken. **Meiner Ansicht nach** war es ein wunderbarer Tag und **offensichtlich** hatte ich einen großen Kuchen mit Kerzen. **Im Großen und Ganzen gab** es eine tolle Stimmung! **Vielleicht** in der Zukunft, **wenn ich älter bin**, werde ich zum Geburtstag einen Ausflug machen **jedoch** wenn ich viel Geld **hätte, würde** ich ins Ausland reisen, **um** meinen Geburtstag am Strand **zu** feiern. Das **wäre eindrucksvoll!**

Half term 4 – Tenses revision

Quiz 4.1 – PALM COW

Auf dem ersten Foto gibt es..	On the first photo there is /there are..
Auf dem zweiten Foto gibt es..	On the second photo there is /there are..
Ich sehe auch.....	I also see.....
Ich denke, dass die Leute glücklich sind	I think that the people are happy
Vielleicht sind sie in.....	Maybe there are in.....(eg country)
Meiner Ansicht nach ist das Wetter...	In my opinion the weather is.....
Meiner Meinung nach ist das Foto interessant, weil....	In my opinion the photo is interesting because.....

Quiz 4.2 –generic present tense examples

Ich sehe gern fern	I like to watch TV
Ich gehe nicht gern in die Stadt	I don't like going into town
Jeden Tag treibe ich Sport	I do sport every day
Wir hören Musik	We listen to music
Wir entspannen uns	We relax
Wir verbringen Zeit zusammen	***We spend time together***

Quiz 4.3 –generic past tense examples

Ich habe Fußball gespielt	I played football
Ich habe Sprudelwasser getrunken	I drank fizzy water
Ich habe ferngesehen	I watched TV
Neulich habe ich im Internet gesurft	Recently I surfed the internet
Ich bin in die Stadt /nach Deutschland gefahren	I went into town / travelled to Germany
In letzter Zeit habe ich Zeit mit Familie/Freunden verbracht	***Recently I have spent time with family / friends***

Quiz 4.4 –generic future tense examples

Ich werde in die Stadtmitte fahren	I will travel into the town centre
Ich will fernsehen	I want to watch TV
Ich werde meine Hausaufgaben machen	I will do my homework
Wir werden ins Kino gehen	We will go to the cinema
Wir werden nach.....fahren	We will travel to ....(country/city)
Vielleicht werde ich mehr Zeit für mich haben	***Maybe I will have more time for me***

Quiz 4.5–Conditional tense

Wenn ich mehr Geld hätte, **würde** ich...	..ins Ausland reis**en** ..Designerklamotten kauf**en** ..ein neues Handy haben	If i were to have more money I would... travel abroad / buy designer clothes /have a new phone
Wenn ich mehr Zeit hätte, **würde** ich...	..mehr Sport treiben ..mehr Schularbeit machen ..mehr reisen	If i were to have more time I would... do more sport / do more school work / travel more

Wenn ich die Wahl hätte, würde ich nochmal hingehen = if I were to have the choice I would go again!

Model answers – exam questions

Foundation writing paper – 50 word writing task ***Your Swiss pen pal has asked you about holidays. Write a short description of your favourite place to go on holiday. Write approximately 50 words in German.*** ***You must write something about each bullet*** ****the location*** ****how you get there*** ****the weather*** ****the accomodation*** ****activities you do there***	Hallo Mein Lieblingsurlaub ist in Spanien. Ich fahre jeden Sommer mit meiner Familie nach Spanien, um braun zu werden, weil es entspannend ist. Wir fahren meistens mit dem Flugzeug, obwohl es teuer ist Ich liebe das Wetter in Spanien. Normalerweise ist es sehr warm und sonnig und man kann am Strand spielen. Wir bleiben in einem schönen Hotel mit Freibad und Balkon. Mein Zimmer ist oft groß und hat eine Klimanlage!!! Jeden Tag gehe ich zum Strand und ich schwimme im Meer, weil es lustig ist und man kann viel Spass haben.

Higher and foundation speaking exam – PALM COW example 	**P** – auf dem ersten Foto gibt es viele Leute. Ich sehe Jugendliche und vielleicht auch Familien **A** – sie sitzen in der Sonne und entspannen sich, sie essen ein Picknick oder sie hören Musik **L**– Ich denke, dass sie in Berlin sind denn ich sehe ein Denkmal im Hintergrund **M** – sie sind glücklich und sie haben Spaß, weil es ein schöner Tag ist **C** – sie tragen Sommerklamotten, zum Beispiel Jeans und ein T-Shirt. Ich denke, dass sie modisch sind. **W** – das Wetter ist sehr warm und sonnig. Es ist oft warm in Berlin im Sommer **O** – meiner Meinung nach ist das Foto interessant denn ich möchte auch nach Berlin fahren, um Spaß mit Freunden zu haben

Half Term 3 – Popular Culture Theme 2 / Customs, Festivals and Celebrations

Quiz 3.1 – Les fêtes

Pour mon anniversaire	For my birthday
la **fête**	Party, festival
la Fête	Bastille Day, French national holiday
le Noël	Christmas
la Saint-Sylvestre	New year / New Year's Eve
l'Aïd	Eid
le Pâques	Easter

Quiz 3.2 – festivals key phrases

Each year there is **a big festival** in my town	**Chaque année** il y a **une grande fête** dans ma ville
We like to watch **the fireworks**	Nous aimons regarder **les feux d'artifice**
There is **a parade** in **the street**	Il y a **un défilé** dans **la rue**
I participate in the parade	Je participe au défilé
There is no school because it's **a bank holiday**	Il n'y a pas d'école car c'est **un jour férié**
We reserve tickets on the internet	Nous réservons des billets sur internet

Quiz 3.3 – christmas activities – what you normally do

Normally **i decorate** the christmas tree	Normalement **je décore** le sapin de noël
I prepare **the turkey** and the table	Je prépare **la dinde** et la table
I listen to **christmas music** with my family	J'écoute de **la musique de** noël avec ma famille
We like to **open** presents	Nous aimons **ouvrir** des cadeaux
I like to eat **lots of** chocolate	J'aime manger **beaucoup de** chocolat
I love **to give** presents	J'adore **donner** des cadeaux

Quiz 3.4 – qu'est ce que tu as fait?

I celebrated with my family	J'ai célébré avec ma famille
I received a gift	J'ai reçu un cadeau
We ate a big meal as a family	Nous avons mangé un grand repas en famille
We saw **a parade** in **the street**	Nous avons vu **un défilé** dans **la rue**
We watched the **fireworks**	Nous avons regardé **les feux d'artifice**
We organised a party	Nous avons organisé une fête

Quiz 3.5 – qu'est ce que tu vas faire

Je vais organiser une fête	I will organise a party
Je voudrais célebrer ensemble en famille	I would like to celebrate together family
Je voudrais recevoir beaucoup de cadeaux	I would like to get lots of presents
Peut-être je vais inviter mes copains	Maybe I will invite friends
Ce sera très amusant	It will be very funny
Si j'avais plus d'argent, je voudrais....	***If I had more money I would..***

Model answers

90-Word Model answer F/H You are writing about festivals that you celebrate. Write approximately 90 words. Describe *What is your favourite fesitval* *How you celebrated last Christmas* *What are your plans for your next birthday*	Je préfère célébrer Noël **parce que** c'est très amusant et tradtionnel. **En plus**, j'adore **ouvrir** des cadeaux et passer du temps en famille. **Je pense que** c'est important et j'aime manger la dinde car c'est délicieux. **L'année dernière, je suis allée** en Espagne **pour** célébrer Noël. **Nous avons** regardé un feu d'artifice. **Après avoir fait cela, nous avons** mangé un repas **parce que j'avais faim. A mon avis, c'était** intéressant. Cette année **je vais** manger du chocolat et je vais manger du steak **parce que** j'adore la viande. **Je voudrais** boire du coca. **Je pense que ça sera** formidable! I prefer to celebrate Christmas **because** it is very fun and traditional. **In addition** I love to **open** presents and spend time as a family. **I think that** it is important and I like to eat turkey because it is delicious. **Last year I went** to Spain **in order to** celebrate Christmas. **We** watched a firework display. **After having done that we** ate a meal **because I was hungry**. **In my opinion it was** interesting. This year **I am going to** eat chocolate and I am going to eat steak **because** I love meat. **I would like** to drink coke. **I think it will be** great!
150-Word Model answer H You are writing an article about celebrations in your country Describe *what is your favourite celebration *something you celebrated recently	Ma fête préférée est Noël, **surtout** le jour de Noël, car je suis **toujours** avec ma famille. **D'habitude**, j'ouvre mes cadeaux car j'adore la surprise! **Par exemple**, l'année dernière, j'ai reçu de l'argent et des billets de concert, **donc** j'étais très content! **En plus**, je trouve Noël **vraiment** super, car nous préparons un bon repas et nous mangeons **beaucoup. Je le trouve inoubliable Après avoir fait cela**, je regarde la télé avec ma famille **pour me relaxer.** **Récemment**, j'ai fêté mon anniversaire, **où** j'ai invité mes grands-parents et il y avait fête de famille dans le jardin, car il y avait du soleil. Nous avons mangé du poisson et de la viande et nous avons bu **un peu** de bière. À mon avis, **c'était une journée merveilleuse** et **bien sûr**, j'avais un grand gâteau au chocolat. **Il y avait une super ambiance**! À l'avenir, je vais aller en vacances pour mon anniversaire et **si j'avais beaucoup d'argent, je voudrais** aller en Espagne avec mes copains. **Ce serait incroyable!** My favourite festival is Christmas, **especially** Christmas Day because I am **always** with my family. **Normally** I open my presents because I love the surprise. **For example** last year I received money and concert tickets **therefore** I was very happy! **In addition** I find Christmas **really** super because we prepare a good meal and we eat **a lot. I find it unforgettable. After having done that,** I watch TV with my family **in order to relax.** **Recently** I celebrated my Birthday **where** I invited my Grandparents and there was a family party in the garden because it was sunny. We ate fish and meat and drank **a bit** of beer. In my opinion **it was a marvellous day** and **of course** I had a big chocolate cake. **There was a super atmosphere.** In the future I am going to go on holiday and **if I had a lot of money I would like** to go to Spain with my friends. **It would be unbelievable.**

Half term 4 – Tenses revision

Quiz 4.1 – PALM COW

Sur la première photo, il y a...	On the first photo there is /there are..
Sur la deuxième photo, il y a...	On the second photo there is /there are..
Je vois aussi.....	I also see.....
Je pense que les personnes sont contents	I think that the people are happy
Peut-être ils sont dans.....	Maybe there are in.....(e.g. building)
À mon avis, il y a du soleil	In my opinion it is sunny
À mon avis, la photo est intéressante parce que.....	In my opinion the photo is interesting because.....

Quiz 4.2 –Generic present tense examples

J'aime regarder la télévision	I like to watch TV
Je n'aime pas aller en ville	I don't like going into town
Je fais du sport tous les jours	I do sport every day
Je mange un repas avec ma famille	I eat a meal with my family
Nous écoutons de la musique	We listen to music
Nous jouons au foot	We play football

Quiz 4.3 –generic past tense examples

J'ai joué au foot	I played football
J'ai mangé une pizza au café	I drank fizzy water
J'ai regardé la télé	I watched TV
Hier j'ai chatté avec mes copains	Yesterday I chatted with friends
Je suis allé (e) en ville / en France	I went into town / to France
Récemment j'ai passé du temps avec ma famille	***Recently I have spent time with family / friends***

Quiz 4.4 –generic future tense examples

Je vais aller au centre ville	I will go into the town centre
Je voudrais regarder la télé	I would like to watch TV
Je vais faire mes devoirs	I will do my homework
Nous allons aller au cinéma	We will go to the cinema
Nous allons voyager.....	We will travel to ....(country/city)
J'espere visiter mes copains	I hope to visit my friends
J'ai l'intention de garder la forme	I intend to keep fit

Quiz 4.5–Conditional tense

Si j'avais plus d'argent, je voudrais....	..voyager à l'étranger ..acheter des vêtements de luxe avoir un nouveau téléphone	If i were to have more money I would... travel abroad / buy luxury clothes / have a new phone
Si j'avais plus de temps, je voudrais	..faire plus de sport ..faire plus de devoirs ..voyager plus	If i were to have more time I would... do more sport / do more school work / travel more

Si j'avais le choix, j'y retournerais!= if I were to have the choice I would go again!

Model answers – exam questions

Foundation writing paper – 50 word writing task Y***our Swiss pen pal has asked you about holidays. Write a short description of your favourite place to go on holiday. Write approximately 50 words in French*** ***You must write something about each bullet*** ****the location*** ****how you get there*** ****the weather*** ****the accommodation*** ****activities you do there***	Bonjour. J'adore aller en Espagne. Je vais en Espagne avec ma famille pour me bronzer car c'est relaxant. Je voyage en avion parce que c'est rapide, mais un peu cher En Espagne il y a du soleil et j'adore le soleil car on peut jouer à la plage Je reste dans un grand hôtel de luxe et il y a une piscine et un balcon. A mon avis c'est super! Je joue au volley à la plage et je mange beaucoup de pizza. C'est cool! - Hello I love to go to Spain. I go to Spain with my family in order to get a tan because it is relaxing. - I travel by plane because it is fast, but a bit expensive - In Spain it is sunny and I love sun because you can play on the beach - I stay in a big luxury hotel and there is a pool and a balcony. In my opinion it is super. - I play volleyball at the neach and I eat a lot of pizza. It is cool!

Higher and foundation speaking exam – PALM COW example (photo 1) 	**P** Sur la première photo il y a une famille. Il y a les parents et les enfants. En plus je vois un chien. **A** Ils jouent au foot ensemble et peut-être ils mangent un pique-nique **L** Ils sont dans le parc donc je vois beaucoup d'arbres et un grand jardin. **M** Ils sont contents vu que c'est une bonne journée **C** A mon avis ils sont a la mode. Ils portent les shorts et un t-shirt **W** Il y a du soleil et je dirais qu'il fait chaud **O** Je pense que la photo est interessant car j'adore le foot dans le parc avec ma famille

GCSE History Paper 2: Superpower Relations KT3: End of the Cold War

Key Terms

Reasons for Detente		15. Carter Doctrine	A US vow to go to war if their interests in Middle East threatened
1. Détente	An period of improved relations between US and USSR	16. Boycott	A refusal to use certain services or to attend an event
2. Linkage	Nixon's plan to 'link' benefits to positive Soviet actions	**Reagan and the Second Cold War**	
3. Bilateral	Agreements that involve cooperation between two parties	17. Second Cold War	Reagan's escalation of the Cold War after the failure of detente
Détente		18. NUTS	Targeting nuclear weapons at USSR warheads, not cities
4. SALT I	A plan to limit production of new nuclear weapons	19. START	Talks focused on reducing total nuclear weapons on both sides
5. ABM	Anti-Ballistic Missiles – reduced by the SALT Treaty	20. SDI	'Star Wars' – high tech laser guided missile protection system
6. MIRV	Weapons that contained several targetable warheads	**Gorbachev's 'New Thinking'**	
7. Disarmament	Reducing or completely destroying supplies of weapons	21. New Thinking	A series of reforms proposed by Gorbachev to modernise USSR
8. Apollo-Soyuz	A US-Soviet meeting in space to show their cooperation	22. Perestroika	'Restructuring' – economic changes to the USSR and communism
9. Helsinki Agreements	Agreements over issues like security and human rights	23. Glasnost	'Openness' – greater freedoms within the USSR and E Europe
10. Human Rights	Basic freedoms that are not respected in some countries	24. Dissidents	Political opponents to a regime that often experience persecution
Afghanistan and End of Détente		25. Uskoreniye	Acceleration – a Soviet plan to boost and modernise the economy
11. Mujahideen	An Afghan resistance force that was armed by the US	26. INF Treaty	First successful agreement to reduce nuclear weapons
12. Jihad	A Muslim 'holy war' that was declared against the USSR	27. Sinatra Doctrine	Nickname of plan for E European countries to do things 'their way'
13. Fundamentalism	An extreme and dangerous version of a religion	**The Fall of the Berlin Wall and the End of the Cold War**	
14. Embassy	A building that represents one country's people in another.	28. Reunification	Germany being reunited into a single country after being divided

Nixon 1969-1974

Ford 1974-77

Carter 1977-1981

Reagan 1981-1989

Bush Sr. 1989-1993

1970
1971
1972 SALT I signed / Nixon visits Moscow
1973 USSR brokers peace deal to end Vietnam War
1974 Nixon visits Moscow for second time
1975 Apollo-Soyuz link up / Helsinki agreements
1976
1977
1978 Communist revolution in Afghanistan
1979 SALT II discussions end / Soviets invade Afghanistan 1980 US boycott of Moscow Olympics
1981
1982 Death of Brezhnev / Andropov new leader
1983 SDI announced 'Star Wars'
1984 Soviets boycott LA Olympics / Chernenko new leader
1985 Gorbachev new leader / Reagan + Gorbachev meet
1986 Reykjavik Summit collapses
1987 INF Treaty
1988
1989 Iron Curtain ends / Berlin Wall pulled down
1990 Collapse of Soviet Union / Germany reunited
1991 START I / Gorbachev resigns / Warsaw Pact ends

Key places	
East Germany	Oct-Nov 1989: Millions protest on the streets of major cities Nov 1989: Berlin Wall is opened Oct 1990: German reunification
Poland	1988: Mass strikes across country 1989: Solidarity party wins elections and first non-Communist leader in E Europe is elected.
Hungary	1988: Becomes multi-party state 1989: Border opens with democratic Austria 1990: anti-Communist alliance wins elections
Czechoslovakia	Nov 1989: Mass protests against Communism lead to resignation of government Dec 1989: Non-communist president appointed 1990: Elections won by non-Communist alliance
Romania	25 Dec 1989: Communist dictator Ceausescu executed 1990: Democratic elections held, won by party dominated by ex-communists
Bulgaria	1990: Democratic elections held, won by renamed Communist Party

Ronald Reagan	Mikhail Gorbachev
Ronald Reagan was a former Hollywood actor who was elected US President in 1980. He took a tougher line with the USSR, and his SDI 'Star Wars' initiative led to massive military spending. His description of the USSR as the 'Evil Empire' in 1982 deteriorated relations, but his policies forced the USSR to accept that they couldn't keep up with US progress and that reform was necessary.	Mikhail Gorbachev came to power in 1985 with the USSR in crisis. He was their fourth leader in the last three years and their political and economic situation looked bleak. Gorbachev announced a series of reforms called 'New Thinking' including 'glasnost' and 'perestroika'. His willingness to reform the USSR and improve relations with the West made him incredibly popular in the USA. His reforms brought about the end of the Soviet Union.

Date	Summit, Meeting or Treaty	Key points
1972	Nixon visits Moscow	Nixon agreed to participate in European Security Conference which led to Helsinki Agreements.
1972	SALT 1	Restrictions on new nuclear weapons
1974	Nixon visits Moscow	Commitment to reduce tensions further
1975	Helsinki Agreements	Agreements on security, cooperation and human rights
1985	Geneva Summit	Commitment to abolish chemical weapons, Reagan refused to cancel SDI
1986	Reykjavik Summit	Talks collapse over continued refusal to cancel SDI
1987	INF Treaty	Large scale reduction of nuclear weapons

GCSE History Paper 2: Superpower Relations KT2: Cold War Crises

Key Terms			
The Berlin Crisis, 1961		11. Hawks and Doves	People who favoured aggressive or diplomatic US response
1. Defection	Leaving one country to go to its enemy	12. Brinkmanship	Going right to the edge to get what you want
2. Refugee	A person fleeing crisis in their home country	**Consequences of the Cuban Missile Crisis**	
3. Ultimatum	A final choice with two serious options	13. Hotline	A telephone connection to allow instant communication
The Construction of the Berlin Wall		14. Treaty	An agreement between countries
4. Checkpoint	A guarded border post on the Berlin Wall	15. Detente	The thaw in relations that led to progress between US/USSR
The Cuban Revolution		**The Prague Spring**	
5. Dictator	A leader with total power over the country	16. Reforms	Changes to the way the country is run
6. Diplomat	A representative from one country in another	17. Censorship	Limiting the information that people have access to
7. Exile	A person forced to leave a country to live in another	**The Soviet Invasion of Czechoslovakia**	
8. CIA	The Central Intelligence Agency – US spy network	18. Resistance	Refusal to cooperate
9. Bay of Pigs	A bay in Cuba that was the focus of a failed invasion	19. Propaganda	Materials which are designed to push a particular message
The Cuban Missile Crisis		20. Brezhnev Doctrine	USSR plan to invade countries which threatened E. Europe
10. U-2	US spy plane which captured images of the missiles	21. Vietnam War	A disastrous conflict the US was involved in in the 1960s/70s

Eisenhower 1953-1961

Kennedy 1961-1963

Johnson 1963-1969

Nixon 1969-1974

1958 Berlin Ultimatum

1959 Khrushchev visits USA / Cuban revolution

1960 Planned Paris Summit / U-2 spy plane crisis

1961 Vienna Summit / Berlin Wall built / Bay of Pigs

1962 Cuban Missile Crisis

1963 Kennedy visits Berlin

1964 Brezhnev replaces Khrushchev as Soviet leader

1965

1966

1967

1968 Prague Spring / Soviet invasion / Brezhnev Doctrine

1969 Czech Anti-Soviet demonstrations continue

1970

Two crises in Berlin – not the same thing!	
Berlin Crisis of 1948	Berlin Crisis of 1961
The Berlin crisis of 1948 was caused by Stalin, who was resentful of the US and Britain having free access through East Germany to get to their sectors of Berlin. He thought they were spying on the Communist country and were spreading pro-capitalist messages. He closed off all the roads and railways, and attempted to force the US and Britain to give up their claim to West Berlin. Instead, the US organised airlifts of food and fuel to defeat the blockade and save the people of West Berlin. Stalin eventually had to back down. This crisis was significant in the wider Cold War because it showed that the USA was prepared to back up its words in the Truman Doctrine with actions. It was also significant because it led to the creation of NATO.	The Berlin Crisis of 1961 was caused by Khrushchev, who was resentful of highly qualified professionals leaving East Berlin and East Germany. There was no border between the East and West zones, meaning that people frequently travelled to the West and then on to capitalist countries that they otherwise were not allowed to go to. Highly qualified people knew they could earn lots more money in the capitalist West, so the 'brain drain' was a big concern for Khrushchev. He attempted to force the US to prevent this migration, but the US refused, so Khrushchev authorised the East Germans to build a wall around the entirety of West Berlin. This meant no East Germans could enter or they would be shot. Migration stopped, but the city was cut in two. The wall stood for 28 years.

Three Cold War Crises		
The Berlin Crisis 1961	Cuban Missile Crisis 1962	Czechoslovakia 1968
Key individuals: • Eisenhower and Kennedy (USA) • Khrushchev (USSR) Causes: • 'Brain drain' refugee crisis - hundreds of thousands of highly qualified workers leaving East Germany for the West Key events: • Berlin ultimatum 1958 • Vienna Summit 1961 • Construction of the Berlin Wall 1961 Outcomes: • West Berlin isolated and migration ended • Heightened tensions between USA and USSR	Key individuals: • Kennedy (USA) • Khrushchev (USSR) • Castro (Cuba) Causes: • USSR placed missiles on Cuba in response to US Jupiter missiles in Turkey. Key events: • Communist revolution led by Castro 1959 • Bay of Pigs invasion 1961 • Missiles discovered by USA • Kennedy ordered removal + blockaded Cuba Outcomes: • Increased rivalry between USA and USSR • Hotline installed for instant communication • Various treaties between 1963 and 1968	Key individuals: • Brezhnev (USSR) • Dubcek (Czechoslovakia) • Johnson (USA) Causes: • Czechs demanded greater freedoms and economic reform. Dubcek appointed leader Key events: • Dubcek announced Prague Spring reforms • Opposition to Communism increase • USSR invades and arrests Dubcek, reversing reforms Outcomes: • Brezhnev Doctrine • Other communist countries condemned USSR • US condemnation but no intervention

CIRCLES

Year 11 Higher Maths Absolute

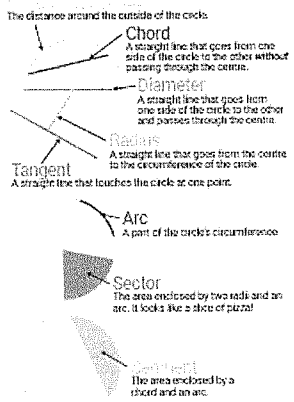
A circle is a 2D shape where all of the points that form the circle are an equal distance from the centre.

π 'PI' is ratio of the circumference of every circle to its diameter $\pi = 3.1415926535897932...$

Check that you:

- recognise 2D shapes and their properties
- understand the difference between perimeter, area and volume
- can substitute values into a formula
- can find missing angles on a straight line, at a point and in a triangle.

Key terms



Circumference

$C = \pi d$ or $C = 2\pi r$

$C = \pi d$

$= \pi \times 5$

$= 5\pi$

$= 15.7\ cm$ to 1 d.p.

Area

$A = \pi r^2$

$= \pi \times 10^2$

$= 100\pi$

$= 314.2\ cm^2$ to 1 d.p.

Volume of a cylinder

$V = \pi r^2 h$

$r = 3cm$

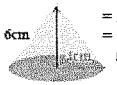
$= \pi \times 3^2 \times 9$

$= 81\pi$

$= 254.5\ m^3$ to 1 d.p.

Volume of a cone

$V = \frac{1}{3}\pi r^2 h$



$= \frac{1}{3}\pi \times 4^2 \times 6$

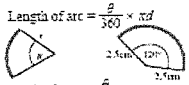
$= 32\pi$

$= 100.5\ cm^3$ to 1 d.p.

Take care when working with semi circles or compound shapes involving circles.

Length of an arc

Length of arc $= \frac{\theta}{360} \times \pi d$



Length of arc $= \frac{\theta}{360} \times \pi d$

$= \frac{120}{360} \times \pi \times 5$

$= 5.2cm$ to 1 d.p.

Area of a sector

Area of sector $= \frac{\theta}{360} \times \pi r^2$

Area of sector $= \frac{\theta}{360} \times \pi r^2$

$= \frac{80}{360} \times \pi \times 10^2$

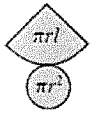
$= 69.8\ cm^2$ to 1 d.p.

Surface area of a cylinder

$SA = 2\pi r^2 + 2\pi rh$

Surface area of a cone

$SA = \pi r^2 + \pi rl$



$* l = \sqrt{h^2 + r^2}$

Volume of a Sphere

$V = \frac{4}{3}\pi r^3$

$= \frac{4}{3}\pi \times 12^3$

$= 2304\pi$

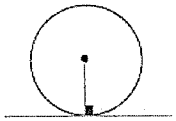
$= 7238.2cm^3$ to 1 d.p.

Surface area of a sphere

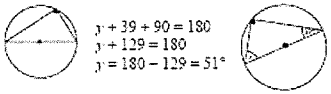
$SA = 4\pi r^2$

Circle Theorems

The tangent is perpendicular i.e. at 90° to the radius.



The angle in a semicircle is a right-angle i.e. 90°.

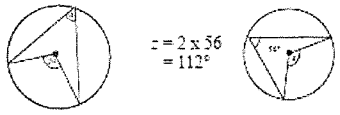


$y + 39 + 90 = 180$

$y + 129 = 180$

$y = 180 - 129 = 51°$

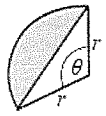
The angle at the centre is double the angle at the circumference.



$x = 2 \times 56$

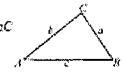
$= 112°$

Area of a segment



Area of segment = area of sector − area of triangle

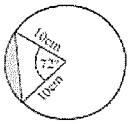
$= \frac{\theta}{360} \times \pi r^2 - \frac{1}{2} r^2 Sin\theta$ → $*\frac{1}{2} abSinC$



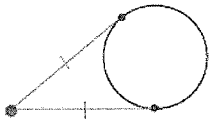
Area of segment $= \frac{\theta}{360} \times \pi r^2 - \frac{1}{2} r^2 Sin\theta$

$= \frac{72}{360} \times \pi \times 10^2 - \frac{1}{2} \times 10^2 \times Sin72$

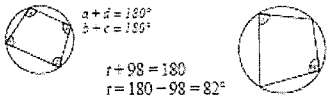
$= 15.3cm^2$ to 1 d.p.



The lengths of two tangents from a point are always equal.



Opposite angles in a cyclic quadrilateral add to 180°.



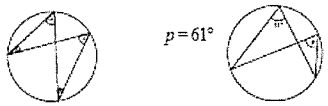
$a + d = 180°$

$b + c = 180°$

$t + 98 = 180$

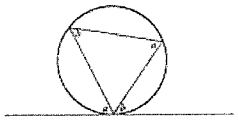
$t = 180 - 98 = 82°$

Angles in the same segment are equal.



$p = 61°$

The angle between a tangent and a chord is equal to the angle in the alternate segment.

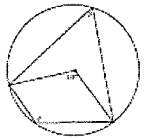


Questions involving more than one theorem

Example

Find the angles marked p and q.

You must give a reason for each of your answers.



* Diagram not drawn to scale

$p = 118 \div 2$

$p = 59°$

This is because the angle at the centre of the circle is double the angle at the circumference.

$q + p = 180°$

$q + 59 = 180$

$q = 180 - 59$

$q = 121°$

This is because opposite angles in a cyclic quadrilateral add to 180°.

Vectors

Year 11 Higher Maths Absolute

A vector describes a movement of an object from one point to another.
A vector quantity has both magnitude and direction.

Check that you can:
- add, subtract and multiply negative numbers.

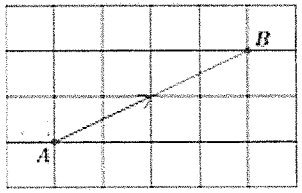
Vector representation

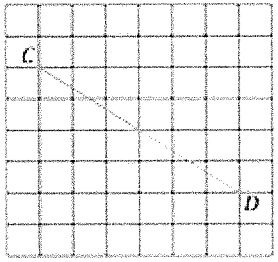
A vector between A and B can be described as $\overrightarrow{AB}$, $\boldsymbol{AB}$, $\boldsymbol{a}$ or $\underline{a}$.

Vectors can be represented using the column vector $\begin{pmatrix} x \\ y \end{pmatrix}$. Where x is the number of moves in the positive horizontal direction, and y is number of moves in the positive vertical direction.

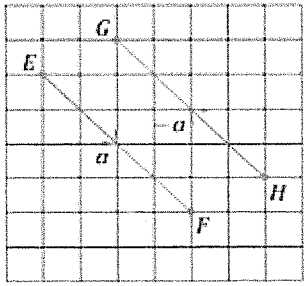
The below vector, $\boldsymbol{AB}$, can be written as $\begin{pmatrix} 4 \\ 2 \end{pmatrix}$.

The vector, $\boldsymbol{CD}$, can be written as $\begin{pmatrix} 6 \\ -4 \end{pmatrix}$.





Vectors, $\boldsymbol{EF}$ and $\boldsymbol{GH}$ are of equal magnitude but opposite direction.



$EF = -GH$

If $EF = a$,
then $GH = -a$

Adding and subtracting vectors

When adding or subtracting vectors either add the corresponding x components and y components or subtract them.

Example 1

If $\boldsymbol{a} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$ and $\boldsymbol{b} = \begin{pmatrix} -5 \\ 2 \end{pmatrix}$, then,

$$\boldsymbol{a} + \boldsymbol{b} = \begin{pmatrix} 3 \\ 2 \end{pmatrix} + \begin{pmatrix} -5 \\ 2 \end{pmatrix} = \begin{pmatrix} 3 + -5 \\ 2 + 2 \end{pmatrix} = \begin{pmatrix} -2 \\ 4 \end{pmatrix}$$

Example 2

If $\boldsymbol{a} = \begin{pmatrix} 4 \\ 2 \end{pmatrix}$ and $\boldsymbol{b} = \begin{pmatrix} 2 \\ -3 \end{pmatrix}$, then,

$$\boldsymbol{a} - \boldsymbol{b} = \begin{pmatrix} 4 \\ 2 \end{pmatrix} - \begin{pmatrix} 2 \\ -3 \end{pmatrix} = \begin{pmatrix} 4 - 2 \\ 2 - -3 \end{pmatrix} = \begin{pmatrix} 2 \\ 5 \end{pmatrix}$$

REMEMBER!
Vectors have both magnitude and direction.
Scalars have magnitude only.
Negative vectors have the same magnitude but opposite direction.

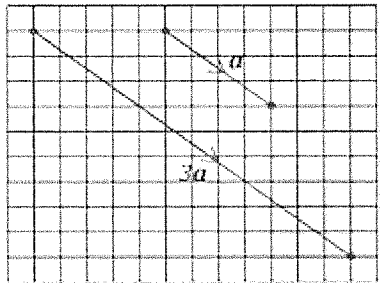
Multiplying vectors

When multiplying a vector by a scalar, multiply both x and y movements by the the scalar.

Example 1

If $\boldsymbol{a} = \begin{pmatrix} 4 \\ -3 \end{pmatrix}$, calculate $3\boldsymbol{a}$.

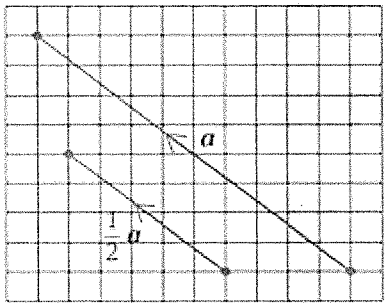
$$3\boldsymbol{a} = \begin{pmatrix} 3 \times 4 \\ 3 \times -3 \end{pmatrix} = \begin{pmatrix} 12 \\ -9 \end{pmatrix}$$



Example 2

If $\boldsymbol{a} = \begin{pmatrix} -10 \\ 8 \end{pmatrix}$, calculate $\frac{1}{2}\,\boldsymbol{a}$.

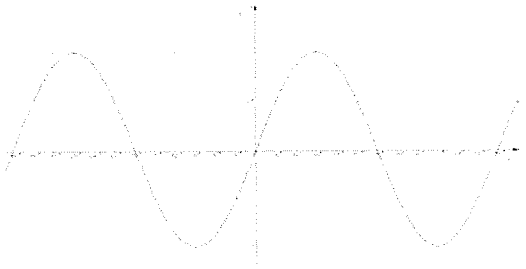
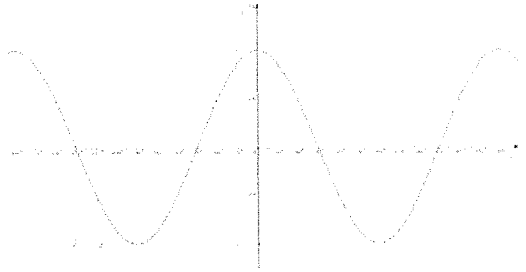
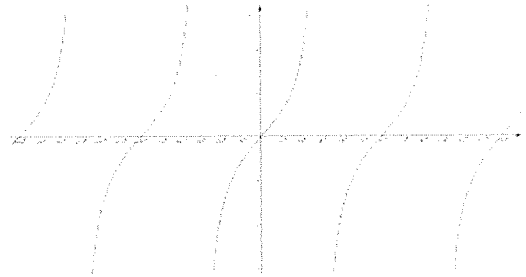
$$\frac{1}{2}\,\boldsymbol{a} = \begin{pmatrix} -10 \div 2 \\ 8 \div 2 \end{pmatrix} = \begin{pmatrix} -5 \\ 4 \end{pmatrix}$$



Trigonometric graphs

Drawing, recognising and using the graphs of sin, cos and tan

Check that you can:
- *solve equations to find the unknown variable*
- *use the trigonometric and inverse function buttons on your calculator.*

Graph	Key features
Here is the graph of $y = \sin x$ for the values $-360° \leq x \leq 360°$. 	◆ The graph makes one complete 'wave' in 360°. This means that the graph repeats itself every 360°. This is referred to as the **period** of the graph. ◆ It **goes** through the origin (0, 0). ◆ The **maximum value is 1 and minimum is -1** so we can say that $-1 \leq \sin x \leq 1$.
Here is the graph of $y = \cos x$ for the values $-360° \leq x \leq 360°$. 	◆ The graph makes one complete 'wave' in 360°. This means that the graph repeats itself every 360°. Therefore, the **period** of the graph is again 360°. ◆ It **does not** go through the origin (0,0). ◆ It **crosses the *y* axis** at (0,1). ◆ The **maximum value is 1 and minimum is -1**, so we can say that $-1 \leq \cos x \leq 1$. ◆ The **shape is the same** as $y = \sin x$ but it has been transformed (moved left 90°). ◆ The curve is **symmetrical** about the *y*-axis.
Here is the graph of $y = \tan x$ for the values $-360° \leq x \leq 360°$. 	◆ The graph makes one complete 'wave' in 180°. This means that the graph repeats itself every 180°. Therefore, the **period** of the graph is **180°**. ◆ It **goes** through the origin (0,0). ◆ The **shape is not similar** to either the sin graph or the cos graph. ◆ There are some values that are undefined, i.e. values of $\tan x$ that will appear as an error on any calculator. **There will be a break in the graph at these values**, at $x = \pm 90°, \pm 270°, \ldots$. The imaginary vertical lines at these values of x are called **asymptotes** – they are imaginary lines that the graph of $y = \tan x$ gets close to, but does not touch. ◆ There is no maximum or minimum value, so $-\infty \leq \tan x \leq \infty$.

FRACTION AND PERCENTAGE OF AN AMOUNT

A percentage is an amount 'out of 100' A fraction is a way of describing parts of a whole amount. Percentages and fractions are common real-life applications of mathematics, therefore these methods will be useful for your studies and for the future too!

Check that you:
- *know fraction, percentage and decimal equivalences*
- *can divide by 10 and 100*
- *can halve and double, multiply and divide*
- *can find a fraction of an amount*
- *can use a calculator efficiently*

Percentage of an amount (non-calculator)

50% ⟶ ÷2
25% ⟶ ÷4
10% ⟶ ÷10
1% ⟶ ÷100

E.g., 1) Find 15% of £65.

10% of £65 = 65 ÷ 10 = £6.50
5% of £65 = 6·5 ÷ 2 = £3.25
15% of £65 = 6·5 + 3·25 = **£9.75**

2) Find 32% of £41.

10% of £41 = 41 ÷ 10 = £4.10
30% of £41 = 4·1 × 3 = £12.30

1% of £41 = 41 ÷ 100 = £0.41
2% of £41 = 0·41 × 2 = £0.82

32% of £41 = 12·3 + 0·82
= **£13.12**

Remember there is often more than one way to find a percentage of an amount.

Increase by a percentage +%

E.g., the population of a village of 1780 people increases by 5%.

Find the new population.

10% of 1780 = 178 5% of 1780 = 178 ÷ 2 = 89
New population = original + % increase = 1780 + 89 = **1869**

Decrease by a percentage −%

E.g., Lloyd receives a 20% discount on a laptop priced at £650.

How much does he pay?

10% of £650 = £65 20% of £650 = 65 × 2 = £130
New price = original − % decrease = 650 − 130 = **£520**

Percentage change

$$\text{Percentage change} = \frac{\text{change}}{\text{original}} \times 100$$

E.g., 1) Dafydd received a pay increase following a promotion at work. His annual wage increased from £24000 to £29760.

What percentage increase is this?

$$\text{Percentage increase} = \frac{29760 - 24000}{24000} \times 100$$
$$= \frac{5760}{24000} \times 100$$
$$= 24\%$$

E.g., 2) Nia bought a summerhouse for the garden for £8500. She later sold it for £6000.

Find the percentage loss.

$$\text{Percentage loss} = \frac{8500 - 6000}{8500} \times 100$$
$$= \frac{1500}{8500} \times 100$$
$$= 18{\cdot}75\%$$

Repeated percentage change

E.g., 1) Idris bought a brand new car for £18000. Each year the value of the car depreciates at a rate of 18%. Find the value of the car after 3 years.

$$\text{Value} = \text{Original value} \times \left(1 - \frac{\text{rate}}{100}\right)^{\text{number of years}}$$

Value of the car after 3 years = $18000 \times 0{\cdot}82^3$ = £9924.62

E.g., 2) Sera invests £3500 for 4 years at 2.5% per annum compound interest. Calculate the value of her investment at the end of the 4 years.

$$\text{Amount} = \text{Initial investment} \times \left(1 + \frac{\text{interest rate}}{100}\right)^{\text{number of years}}$$

$$\text{Amount} = 3500 \times \left(1 + \frac{2{\cdot}5}{100}\right)^4$$

$$= 3500 \times (1{\cdot}025)^4$$

$$= £3863.35$$

Reverse percentages

E.g., Gwennan buys a laptop and receives 30% student discount. Knowing that she pays £448 with her discount, find the original value of the laptop.

Percentage of the original value = 100 − 30 = 70%

70% = £448
÷ 70 ⟶ ÷ 70
1% = £6.40
× 100 ⟶ × 100
100% = £640

The original value was £640.

Percentage of an amount (calculator)

Method 1 $\frac{\text{Percentage}}{100} \times \text{amount}$

Method 2 Equivalent decimal × amount

E.g., 1) Find 90% of £328.

$\frac{90}{100} \times 328$ = **£295.20** or 0·9 × 328 = £295.20

2) Find 65% of £65.

$\frac{65}{100} \times 65$ = **£40.95** or 0·63 × 65 = £40.95

3) Find 7% of £41.

$\frac{7}{100} \times 41$ = **£2.87** or 0·07 × 41 = £2.87

Writing a quantity as a percentage of another

E.g., 1) What percentage of 20 is 17?

$\frac{17}{20} \overset{\times 5}{=} \frac{85}{100} = 85\%$

17 ÷ 20 × 100 = 85%

2) Of the £75 Sara received for her birthday, she spent £39 of it. What percentage is this?

$\frac{39}{75} \overset{\div 3 \;\times 4}{=} \frac{13}{25} = \frac{52}{100} = 52\%$

39 ÷ 75 × 100 = 52%

Remember finding an equivalent fraction with a denominator of 100 is easy when the original fraction has a denominator of 2, 4, 5, 10, 20, 25, 50 or even a multiple of 100. With any other denominator see if you can first find an equivalent fraction with one of these as a denominator.

Percentage change using multiplier

Increase £54 by 12%.
1·12 × 54 = £60.48

Increase 3·5kg by 8%.
1·08 × 3·5 = 3·78kg

Decrease 720 by 3%.
0·97 × 720 = 698·4

Decrease 180 cm by 40%.
0·6 × 180 = 108 cm

PERCENTAGE INCREASE
100% + 5% = 105% multiplier 1·05
100% + 15% = 115% multiplier 1·15
100% + 20% = 120% multiplier 1·2

PERCENTAGE DECREASE
100% − 5% = 95% multiplier 0·95
100% − 15% = 85% multiplier 0·85
100% − 20% = 80% multiplier 0·8

Finding a fraction of a quantity

A unit fraction is a fraction which has a numerator of 1.
For example, $\frac{1}{2}, \frac{1}{5}, \frac{1}{9}$, etc.

To find the fraction of a quantity – where the fraction is a unit fraction – simply divide by the denominator. For example:

to find $\frac{1}{2}$ of an amount, we divide it by 2,

to find $\frac{1}{3}$ of an amount, we divide it by 3,

to find $\frac{1}{4}$ of an amount, we divide it by 4.

When the fraction is not a unit fraction

When finding a fraction of an amount, divide by the denominator and multiply by the numerator.

Example 1

Find $\frac{3}{4}$ of 240. Step 1: Find $\frac{1}{4}$ of 240 by **dividing by the denominator.**

$\frac{1}{4}$ of 240 = 240 ÷ 4 = 60.

Step 2: Then, to find $\frac{3}{4}$ of 240, **multiply by the numerator.** As $\frac{1}{4}$ of 240 = 60,

$\frac{3}{4}$ of 240 = 60 × 3 = 180.

When using a calculator, combining the two calculations is easier and less likely to lead to errors.

$\frac{3}{4}$ of 240 = 240 ÷ 4 × 3 = 180.

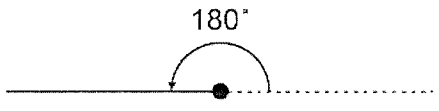
Angles

Year 11 Foundation Maths Absolute

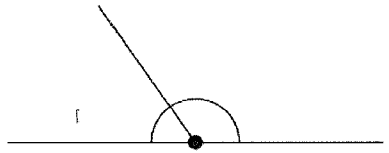
Angles are formed when two lines meet. The lines form the arms of the angle, and the angle measures the amount of rotation needed to move from one arm to the other.

Angles on a straight line

If a line is turned through half a complete turn, then it has turned through 180°.



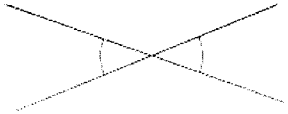
We can use this fact to help us calculate the angles that are formed when one or more lines come to meet at a point on another line. In this diagram, the two angles formed above the horizontal line. They combine to form the half turn angle of 180°.



We refer to these angles as being 'angles on a straight line'. The rule for these angles is that **angles on a straight line always add to 180°.**

Vertically opposite angles

When two or more straight lines cross each other, vertically opposite angles are formed.

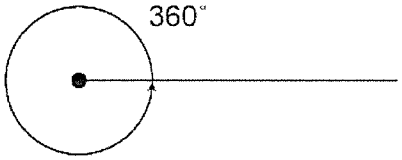


In the same diagram, we can identify another pair of vertically opposite angles.

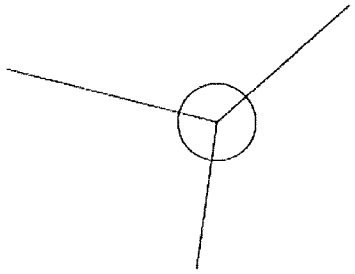
The rule for vertically opposite angles is that **vertically opposite angles are equal to each other.**

Angles around a point

If a line is turned through a full turn, then it has turned through 360°.



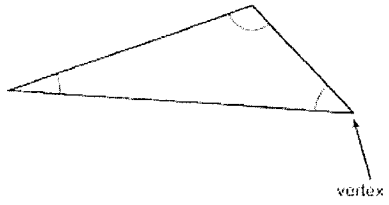
We can use this fact to help us calculate the angles that are formed when two or more lines meet at a point. In this diagram, the three angles that are formed combine to form the full turn angle of 360°.



We refer to these angles as 'angles around a point'. The rule for these angles is that **angles around a point always add to 360°.**

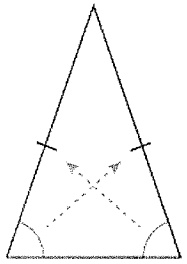
Angles in a triangle

Every triangle has three vertices and three interior angles. The rule for the angles in a triangle is that the **angles in a triangle always add to 180°.**



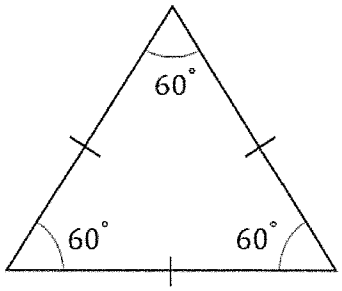
Isosceles triangles

In an isosceles triangle, two of the sides are of equal length, and two of the angles are equal. In this isosceles triangle, the two angles at the base (or bottom) of the triangle are equal. The two sides that are opposite these angles (follow the arrows) will then be equal. They are marked with a short line striking through each equal side.



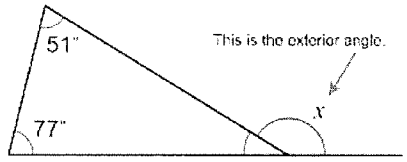
Equilateral triangles

All equilateral triangles have three equal sides and three equal angles. In equilateral triangles, every angle is 60°. For any equilateral triangle, the angles will always be the same size, 60°. However, although the lengths of the three sides will all be equal within a given equilateral triangle, they can be of any length, meaning we can have different sized equilateral triangles.



Exterior angles

Sometimes, one of the sides of the triangle is extended which then creates an exterior angle. As the name suggests, this angle will be outside the triangle.



We can start by calculating the third angle inside the triangle.

$77 + 51 + (3^{rd}\text{ angle}) = 180$

(Angles in a triangle add to 180°.)

$128 + (3^{rd}\text{ angle}) = 180$

$= 180 - 128$

$= 52°$

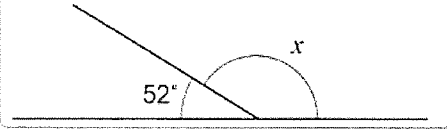
Now we can calculate the size of angle x, by focusing on the angles on the right of the triangle.

These two angles are angles on a straight line.

$52 + x = 180$

$x = 180 - 52$

$x = 128°$



Check that you can:

- recognise the different types of angles, i.e. acute, right-angle, obtuse, straight and reflex
- remember the properties of the different types of triangle
- recognise parallel lines.

Four operations with fractions

Adding, subtracting, multiplying and dividing fractions.

Year 11 Foundation Maths Absolute

Check that you can:

- *find the lowest common multiple (LCM) of two numbers*
- *simplify fractions*
- *turn an improper fraction into a mixed number fraction*
- *find the reciprocal of a number.*

Adding and subtracting fractions with a common denominator

To add or subtract fractions that have a common denominator, we simply add or subtract the numerators (the denominator stays the same).

We may need to simplify our fraction to get the final answer.

Example 1

$\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

Example 2

$\frac{1}{8} + \frac{3}{8} = \frac{4}{8}$

$= \frac{1}{2}$

Example 3

$\frac{5}{9} - \frac{2}{9} = \frac{(5-2)}{9}$

$= \frac{3}{9}$

$= \frac{1}{3}$

Adding and subtracting fractions without a common denominator

When the denominators of the fractions that we want to add or subtract are different, we must first use our knowledge of equivalent fractions to write each fraction with the same, or common denominator.

Then, we simply add or subtract the numerators (the denominator stays the same).

Finally, we may need to simplify our fraction to get the final answer.

Example 1

$\frac{2}{9} + \frac{5}{6}$

The LCM of 9 and 6 is 18, so we use 18 as our common denominator.

$\frac{2}{9} = \frac{4}{18}$ and $\frac{5}{6} = \frac{15}{18}$

$\frac{2}{9} + \frac{5}{6} = \frac{4}{18} + \frac{15}{18}$

$= \frac{19}{18}$

Here, as the answer is an improper fraction, it is usual to change the answer to a mixed number.

$19 \div 18 = 1$ with a remainder of 1, and so the answer is:

$= 1\frac{1}{18}$

Example 2

$\frac{3}{4} - \frac{1}{10}$

The LCM of 4 and 10 is 20, so we use 20 as our common denominator.

$\frac{3}{4} = \frac{15}{20}$ and $\frac{1}{10} = \frac{2}{20}$

$\frac{3}{4} - \frac{1}{10} = \frac{15}{20} - \frac{2}{20}$

$= \frac{13}{20}$

Multiplying fractions

To multiply fractions together, we simply multiply the numerators and multiply the denominators.

We may need to simplify our fraction to get the final answer.

Example 1

$\frac{1}{5} \times \frac{2}{3} = \frac{1 \times 2}{5 \times 3}$

$= \frac{2}{15}$

Example 2

$\frac{4}{5} \times \frac{3}{8} = \frac{4 \times 3}{5 \times 8}$

$= \frac{12}{40}$

$= \frac{3}{10}$

Example 2 can be solved by simplifying first. This can make the multiplication step easier because the numbers are smaller.

$\frac{4}{5} \times \frac{3}{8} = \frac{{}^{1}\cancel{4} \times 3}{5 \times \cancel{8}^{2}}$

$= \frac{1 \times 3}{5 \times 2}$

$= \frac{3}{10}$

Dividing fractions

To divide by a fraction, we simply multiply by its reciprocal.

To find the reciprocal of a fraction, we just turn it upside down – in other words, we switch the numerator and denominator.

For example:

- the reciprocal of $\frac{4}{5}$ is $\frac{5}{4}$
- the reciprocal of $\frac{1}{8}$ is $\frac{8}{1}$ (which is simply 8)
- the reciprocal of 5 is $\frac{1}{5}$ (because 5 is the same as $\frac{5}{1}$).

Example 1

$\frac{3}{10} \div \frac{2}{5}$

The first fraction, $\frac{3}{10}$, stays the same, and we multiply by the reciprocal of the second fraction, $\frac{5}{2}$.

$\frac{3}{10} \div \frac{2}{5} = \frac{3}{10} \times \frac{5}{2}$

$= \frac{15}{20}$

$= \frac{3}{4}$

Another way to do this is simlify first

$\frac{3}{10} \div \frac{2}{5} = \frac{3}{10} \times \frac{5}{2}$

$= \frac{3 \times {}^{1}\cancel{5}}{\cancel{10}^{2} \times 2}$

$= \frac{3 \times 1}{2 \times 2}$

$= \frac{3}{4}$

REMEMBER!

To add and subtract fractions, we must ensure they have the same denominator.

711

P5 Forces and motion

Box 1: Vector and scalar

Scalar quantities have magnitude only. Speed does not involve direction. Speed is a scalar quantity.
Vector quantities have magnitude and an associated direction. Force is a vector quantity. The velocity of an object is its speed in a given direction. Velocity is a vector quantity.
A vector quantity may be represented by an arrow. The length of the arrow represents the magnitude, and the direction of the arrow the direction of the vector quantity.

Box 2: Contact and non-contact

Contact forces – the objects are physically touching. E.g friction, air resistance, tension and normal contact force.
Non-contact forces – the objects are physically separated. E.g gravitational force, electrostatic force and magnetic force.

Box 3: Gravity and Weight

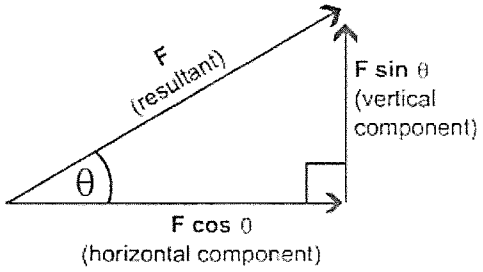
Weight is the force acting on an object due to gravity.
Weight (N) = mass (kg) × gravitational field strength (g)
Weight is measured using a calibrated spring-balance (a newton meter).
Mass is the amount of matter contained inside of an object, this does not change when someone or something changes where they are in the universe

Box 4: Resultant forces

Resultant force is the single force that has the same effect as all the original forces acting together. **Speed** at which a person can walk, run or cycle depends on many factors including: age, terrain, fitness and distance travelled.
Typical values may be taken as:
walking~1.5 m/s
running~3 m/s
cycling~6 m/s.
A typical value for the speed of sound in air is 330 m/s
Work done - a force causes an object to move through a distance work is done on the object. The work done by a force on an object can be calculated using the equation:
Work done (J) = force (N) × distance moved (m)
One joule of work is done when a force of one newton causes a displacement of one metre

Box 5: Vector diagrams **(Higher Tier)**

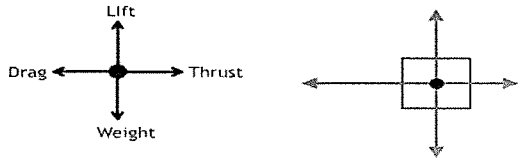
Resolving the force into components



Box 6: Free body force diagrams

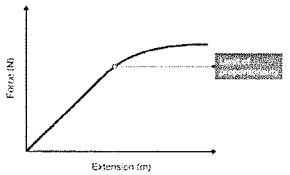
Free body force diagrams (Higher Tier)
A free body force diagram shows the magnitude and direction of the forces acting on an object.

Balanced Forces **Unbalanced Forces**



Box 7: Elasticity and Spring Constant

Extension happens when an object increases in length and compression happens when it decreases. The extension of an elastic object is described by Hooke's law: Force = Spring constant x extension
Spring constant: Is a measure of the stiffness of a spring
Elastic limit: is the furthest point it can be stretched or deformed while being able to return to its previous shape
Work: is done when a spring is extended or compressed
Elastic potential energy: is stored in the spring and shown by the area under the graph



P5 Forces and motion

Box 8: Speed

Speed - for an object moving at constant speed the distance travelled in a specific time can be calculated using the equation:

Distance travelled (m) = speed (m/s) × time (s)

Box 9: Distance and displacement

Distance: is a scalar quantity and is a measure of how far something has travelled

Displacement: is a vector quantity and is a measure of how far away an object is from it's starting point

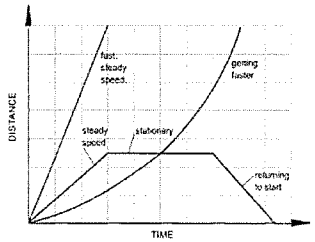
Box 10: Distance time graphs

Distance – Time Graphs

Gradient = Speed

Higher Tier

The speed AT a particular time can be calculated by drawing a tangent to a curve and finding the gradient.



Box 11: Velocity time graphs

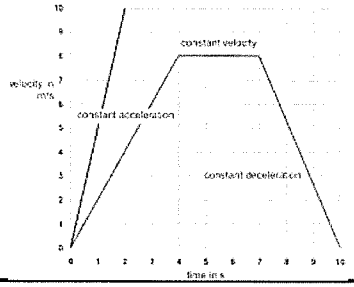
Velocity – Time Graphs

Gradient = Acceleration

Higher Tier

Area under the line = Displacement

The acceleration AT a particular time can be calculated by drawing a tangent to a curve and finding the gradient.



Box 12: Acceleration

Acceleration - near the Earth's surface any object falling freely under gravity has an acceleration of about 9.8 m/s^2.

An object falling through a fluid initially accelerates due to the force of gravity. Eventually the resultant force will be zero and the object will move at its **terminal velocity**. The average acceleration of an object can be calculated using the equation:

Acceleration (m/s^2) = change in velocity (m/s) / time taken (s)

Box 13: Newton's laws

Newton's First Law:

If the resultant force acting on an object is zero, the object will either remain stationary or travel at a constant velocity.

Newton's Second Law:

The acceleration of an object is proportional to the resultant force acting on the object, and inversely proportional to the mass of the object.

As an equation:

Resultant force (N)= mass (kg) × acceleration(m/s^2)

Newton's Third Law:

Whenever two objects interact, the forces they exert on each other are: Equal in magnitude, Opposite in Direction The same type of force

Box 14: Stopping distance and momentum

stopping distance = thinking distance+braking distance

thinking distance - distance the vehicle travels during the driver's reaction time

braking distance - distance it travels under the braking force

Momentum (Higher Tier)

Momentum (kgm/s) = mass (kg) × velocity (m/s)

Conservation of Momentum

In a closed system, the total momentum before an event is equal to the total momentum after the event.

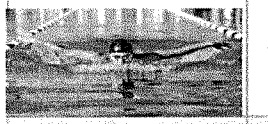
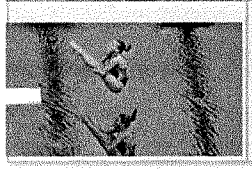
For objects travelling in opposite directions, momentum will be negative for one of them.

PAPER 2 ALL SAINTS ABSOLUTE 4.1 & 4.2 Sports psychology

1.Characteristic of skill movement

Skills are learnt predetermined movement

Motor Skill – A coordinated pattern of movements using voluntary body movement

Characteristics of skilful performance	
	**Pre-determined** – A player will practice skills with an aim in mind e.g. Improving shooting skills in order to score more goals.
	**Aesthetics** – The skills look good. E.g. A high quality dance or gymnastics routine is pleasing to watch this will give them a higher score.
	**Coordination** – The skilful performer is in charge, controlling the rate and timing of the skill. E.g. serving in tennis, throwing the ball up and timing when to hit the ball.
	**Efficiency** – A skilled player is able to perform the task to the same high-level repeatedly without wasted energy. E.g. having a larger reach in swimming to not waste energy.
	**Fluency- Performed in a smooth movement e.g. A gymnastic routine flowing.**

2. Classification of skills

It is useful to classify skills because it makes it clearer about what is required to learn and perform a particular skill.

Every skill can be placed on a continua (scale). There are two continua:

Every skill can be placed on a continua (scale).

There are two continua:

Difficulty Continuum - Simple/Complex

COMPLEX BASIC/SIMPLE

Environmental Continuum - Open/Closed

OPEN CLOSED

Difficulty Continuum
Simple = Straightforward, with very few decisions to be made. Can be taught as a whole in a repetitive way. E.g. Sprint start in athletics, a goal kick/pass in football, swimming stroke.
Complex = Many decisions or judgements/ many linked sub routines. May have to be learned in stages. E.g. dribbling in Basketball, Somersault, Trampolining routine.
Environmental Continuum
Open = the skill is effected by the environment and requires the performer to make perceptual decisions. E.g. passing in football
Closed = the skill is not effected by the environment. E.g. Long Jump, golf swing.

Goal Setting

Why do we set goals?

1. For exercise/**training adherence** – goal setting can help people to stick to a training plan
2. To **motivate** performers – goal setting can inspire and drive performers to achieve their best
3. To improve and/**or optimise performance** – goal setting can often lead to higher levels of performance

Why do some athletes not reach their goals?

1. The goals were unrealistic
2. The athlete did not try hard enough
3. The athlete used poor technique

SMART Targets – Bobby is a 100m sprinter and has used the SMART principle to his targets to optimise his performance on the track.

Specific	Measurable	Achievable/ realistic	Recorded	Time-phased
Targets must be concise. ***"To take a 0.5 second off my time personal best time"*** ***"To increase the number of training sessions attended by the end of the season"***	Must be measured and compared, performances should be measured after each training session. ***"I will time my runs every training session for the next five weeks of training"***	Target must be challenging but yet reachable. ***"My coach and I devised the training programme around improving leg power for my start"*** ***"We agreed that a 0.5 seconds off my personal best is realistic for my current ability and status"***	You must ensure you write down you results in response to your goal. ***I will monitor my performance by writing down how many first serves are aces in Tennis, to see an improvement"***	Set for a particular time to be completed. ***"We agreed to do the training programme four times per week for the next five weeks"***

PAPER 2 ALL SAINTS ABSOLUTE 4.3 & 4.4 Sports psychology

1. **Mental Preparation:** Mental preparation helps athletes to achieve a focused, confident and trusting mind set to allow them to compete at their highest level.

There a 4 types of mental preparation:

1. **Imagery** - A technique involving a performer practising a skill in their head/mind before physically executing it. . The imagery should have the athlete performing successfully and feeling satisfied. E.g. Owen Farrell imagining the set up for his kick.

2. **Mental Rehearsal** – Going over an event/ skills time and time again. This is similar to imagery but can be used to:
- Familiarise the athlete with the competitive environment
- Motivate the athlete by recalling images previous success
- Perfect skills or skill patterns by refining the skill
- Set the stage for the performance with a complete mental run through

3. **Selective Attention** – This is the process of focusing on a particular object in the environment for a certain period of time and blocking out the distractions. ***e.g. free throw in basketball; whereby you focus on the basket and your performance and block out the crowd.***

4. **Positive Thinking** - This involves recognising that the athlete has started worrying about a performance and refocusing by using positive inner thoughts. E.g. A netball player tells herself "focus" or a footballer telling themselves that they can score a penalty kick.

2. Types of Guidance: Needed for learning new skills

Type of Guidance	Advantages	Disadvantages	Example
1.Visual Guidance: Showing a skills/ demonstration.	Provides a mental image. Draws attention to key points beginners to interpret new skills	Can demotivate and overload learner if it's a complex skill.	Providing a demonstration how to perform a Tennis serve/ watching a lay up on an I pad.
2.Verbal Guidance: Terminology and phrases used to make skills simple	Explain tactics and technical info Immediate feedback	Players can be confused easily Lose concentration	Explaining the correct technique for a Handball Jump Shot.
3.Manual Guidance: Physically moving a limb into place.	Builds confidence Eliminates danger Gives feel for whole skill	Learner becomes dependent on support	A coach supporting a shoulder when performing a handspring on a vault.
4.Mechanical Guidance: Involves the use of equipment	Promotes confidence Ensures safety	Learner becomes dependent on support	Using a float in Swimming to help stay a-float. Trampoline belt for somersaults.

4. Feedback: There are 6 Types of Feedback

Feedback	Description/ Evaluation	Application
Negative Feedback	Information about an unsuccessful performance/ weaknesses / what went wrong/ EBI +ve can result in a higher leveled performance -ve This might result in a lowering of confidence.	E.g. A coach telling a Badminton player that his last serve showed poor technique
Positive feedback	Information about successful performance/ What Went Well. +ve Good for beginners to help them gain confidence. -ve Does not correct errors in performance.	e.g. A Coach telling the diver that their handstand to back tuck was fluent,
Internal/ Intrinsic Feedback	This type of feedback happens within the performer. Information is received as a direct result of producing movement.	After taking a corner in football, the player will know straight away if it is the desired ball intended to take.
External/ Extrinsic Feedback	This feedback comes from results of match analysis. Examples include watching a performance back from a video or listening to a coaches comments.	Watching a Hockey hit pass replay on an I pad to gain an understanding of what technical points need improving.
Knowledge of results	Feedback that relates to the outcome of the performance/ skill.	e,g, Looking at the Shot Put distance to gain an understanding of were they are at in their training.
Knowledge of performance	Feedback that relates to the quality of the performance/ skill/ technique.	e.g. A coach telling the high Jumper to drive their knee higher on their next jump.

1. Participation rates – The number of people taking part in physical activity.

There are 5 main factors affecting participation in physical activity and sport:

Groups- G.A.S.E.D= Gender, Age, Socio-economic, Ethnicity, Disability

1. Age – The reason why different age groups participate can vary based on **access, cost, health problems, image problems, time available** and the **nature of the activity**. As you get older trends suggest activity levels decrease. Some sports have age divisions to ensure safety. This can prevent people from taking part.

2. Ethnicity – The number of **ethnic groups** (black, asian & other minorities) playing sport are on the rise. Reasons for the difference include stereotypes, cost and cultural influences. Trends suggest there is still a gap with people of colour participating less than white individuals.

3. Socio-economic group – This is determined by profession and available income. Factors include cost, availability and time. *i.e. golf is far more expensive to participate than athletics.*

4. Gender – Men and women can participate for different reasons including image, cost, time and society. Increased media coverage has helped remove many stereotypes.

5. Disability – This can be a physical or mental impairment. Activities and rules are often adapted *i.e. Wheelchair tennis.* Other barriers include availability, cost and access.

Other reasons for non-participation:

***6. Media** Coverage – lack of coverage of some sports*

***7. Environment & Climate** – denotes which sports are more or less relevant for an area*

***8. Time** – work commitments reduce activity*

***9. Resources** – facilities & provision*

***10. Role Models** – lack of direction & peers*

1. Current Trends (Participation Rates)

2. Priority/Target Groups: Groups of people who have been identified as either not, or in danger of, not participating in sport or physical activity as much as they should.

3. Gender: 15% more males take part in PA/Sport compared to women

4. Age: The 16-24 age group participate most in PA/Sport

5. SOCIO-ECONOMIC: Most adults playing sport are from professional/managerial workers (17% inactive) and lowest amongst manual workers/unemployed (38% inactive)

6. SPORTS PARTICIPATION FIGURES:

HIIT: 518,000+

CYCLING: 93,000

SWIMMING: 283,000

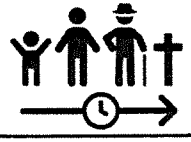
Physical activity and sport in the UK

Current trends in participation in physical activity and sport. The data varies depending on:

- The source of the data
- Different social groups
- Different physical activities and sports.

Strategies for overcoming barriers and increasing participation:

1. **Increase promotion** *e.g. Promote sports and benefits on the TV.*
2. **Increase provision** *e.g. Provide mums and baby group sessions to increase PA*
3. **Increase Access** *e.g. Provide ramps for disabled people to get into the gym* ***or set up new clubs/routes***

1. Barrier: AGE	Strategies	Sporting Examples
	• Exercise classes ran by Age UK • Adapting exercises	Yoga, golf, bowls and walking football are all enjoyed by an older population

2. Barrier : GENDER	Strategies	Sporting Examples
	• National campaigns such as 'This Girl Can' • Increase media coverage • Increase clubs • More promotion	Women's boxing, tennis, rugby, and football have all seen an increase in media coverage and therefore increased popularity. E.g. World cup 2019.

3. Barrier: ETHNICITY	Strategies	Sporting Examples
	Consider religious clothing e.g. Modified Hijabs/ head scarfs to enable Muslim women to take part safely.	In 2016, the first woman competed in a hijab. This encouraged more Muslim women to participate in sport.

4. Barrier: DISABILITY	Strategies	Sporting Examples
	• Increase sports included in Paralympics and Invictus Games	Paralympic cycling, badminton and snowboarding were only introduced after 2010.

5. SOCIO-ECONOMIC	Strategies	Sporting Examples
	• Lottery Funded facilities and clubs • Subsidised membership for people on benefits.	Sports facilities are free to use and sports clubs are awarded grants by Sport England.

Factor	Positive affects	Negative affects/ Barriers	Strategies to improve participation [PROMOTION/ PROVISION/ ACCESS]
Gender	Opportunities for female officials and management roles within teams have grown too and there are a great deal more female presenters on TV.	Male/female discrimination (e.g. females banned from golf clubs). Stereotypes: Some activities traditionally linked to males/females or females don't want to play male sport or males don't want to play female sport or examples of this e.g. males for boxing and females for dancing.	National campaigns such as 'This Girl Can' Increase media coverage Increase clubs at all levels for a range of sports More promotion of a range of sports on the TV.
Age	Many NGBs have developed adaptations of their sport that are suitable for older people.g. Walking netball, walking basketball and walking football are examples.	Some sports have age restrictions e.g. minimum age is for Olympic snowboarding is 15 years; some fitness gyms have a minimum age restriction. Sport is often perceived as a 'young person's activity'. Some older people lack confidence to participate.	Exercise classes ran by Age UK – promote on local radio. Adapting exercises Adult only classes.
Race/Religion/Culture	Taking up a sport or activity may be influenced by ethnic background. i.e. Cricket is very popular among Asian countries Traditional sports are encouraged	In some countries certain ethnic minorities are prevented from joining clubs. E.g. Muslim women, not being able to take part in competitive swimming due to restrictions n their religion. Some sports/activities are banned Some cultures have dress codes such as hijabs and turbans which make participation more difficult. Some religions/cultures expect worship/prayer/festivals at specific times which can affect participation.	Consider religious clothing e.g. Modified Hijabs/ head scarfs to enable Muslim women to take part safely. Women only swimming sessions
Family	You are more likely to participate in sport if your parents do. Support with transport, membership fees.	You are less likely to participate if there is little interest shown by your family; They may place undue pressures on children; too much pressure.	Discounted bus to a local climbing wall Family fun run, for all the family at a local park. Top Tips for Top Mums -Encourages parents to share tips an ideas on how they get their children to eat more fruit and vegetables/ exercise regularly.
Friends/Peers	If your friends are sporty you are more likely to take part in sport.	If your peers tease you when you take part in sport you are more likely to avoid playing.	More education in school about the benefits of physical activity, this can change mind sets, and promote physical activity.
Disability	Activities and rules are often adapted to allow inclusion in sport. i.e. Wheelchair tennis	Limited clubs or access to clubs therefore reducing participation. E.g. Lack of Boccia clubs. E.g. No disabled changing rooms to allow changing. [availability and access]	Increase sports included in Paralympics and Invictus Games
Social Economic	If your parents have unlimited funds, then can pay for travel, equipment and coaching for sports such as Tennis, which can be expensive.	Limiting factors include cost, availability and time. i.e. golf is far more expensive to participate than athletics.	Lottery Funded facilities and clubs Subsidised membership for people on benefits.
Media coverage	Promotes and encourages sport and healthy living. Creates funds and sponsorship. Media coverage is huge for football, which can be accessed on multi platforms. This increases the chance of watching it. Can motivate through role models.	Some sports, such as Squash has limited media coverage, therefore less promotion, less participation. [minority sports]. Disability sports, womens' sports and vet sports are underrepresented.	Promote women in sport, through global campaigns e.g. this girl can, to encourage more people to take part. Promote more minority sports
Environment/climate	If you live in a rural area, near mountains you are more likely to do fell running or climbing.	If you do not live near the Ocean, you are less likely to take up water sports such as surfing.	Build a climbing wall in urban [city] areas to encourage for OAA activities.
Role models	If your role models are on the TV frequently, e.g. Jill Scott you may be inspired to take part. Good behaviour is copied, encourages participation, introduces others to new sports and promotes good sportsmanship.	If your role model does something wrong/ demonstrates poor sportsmanship it may cause you to not like a particular sport. Lack of role models.	Use social media platforms to promote positives of different role models from different cultures in a Varity of sports.

PAPER 2 ALL SAINTS' ABSOLUTE 5.1 & 5.2 Health, fitness and well-being

1.Health- Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease.
2.Wellbeing - this refers to a feeling or mental state of being contented, happy, prosperous and healthy
3. Fitness - A persons ability to carry out daily life activities without becoming overly tired. ability to meet physical demands placed on them by the environment
4. Lifestyle- Daily habits
5. Obesity- Very overweight and a body Mass index of 30 and above.

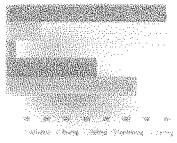
1. Effects of exercise on health

Physical Health	Emotional Health	Social Health
• Increased bone density • Lower cholesterol / reduced obesity • Reduce risk of type 2 diabetes • Increase posture • Development of components of fitness e.g. strength and CV endurance.	• To increase self esteem/confidence – increased endorphins released • Controlling anxiety / managing stress • Relieve stress and tension • Increase happiness • Better self image *e.g. Going to a gym will release endorphins which will help reduce stress levels.*	• To meet new people/friends • Reduce loneliness • Feeling of belonging to a group • May alienate other friends/ acquaintances • May result in rejection from other groups or jealousy • Might result in rejecting other who do not participate in sport *e.g. If I join a Netball team, I will make new friends and socialise more. This will make me happier.*

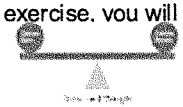
2. Sedentary lifestyle – a way of lifestyle with no/ little physical activity. This includes sitting, reading, watching television & playing video games, sitting at a desk.
Consequence- A lack of energy or feeling lethargic or lack of fitness; More likely to be obese/overweight or negative body image; Lack of interest / motivation/ more stressed; Less likely to benefit from social interaction.

Data
Data is used to gain national information about health, fitness and wellbeing. When studying graphs, look at the X and Y axis to know what the variable area and then comment on the general trend.

3. Health risks associated are:
- Heart disease
- Type 2 diabetes
- **Obesity (result in stroke or CHD)**
- Osteoporosis
- Depression
- Muscular Atrophy
- Poor posture



4. Energy balance – This is where the energy in through food/ calories must match the energy expenditure through exercise/ daily activity. If you eat too many calories and do little exercise. you will slowly increase in body mass.



Diet

5. **Balanced Diet –** Taking in the right amount of energy/nutrient in the right proportions to maintain a healthy body weight.
6. Eat well plate- This must include 55% of Carbohydrates, 30% of fat and 15% Protein. Plenty of fruit and vegetables; Water is essential.

Macronutrients	Micronutrients
Carbohydrates – Main energy source. i.e. Complex starch (pasta, potatoes, cereals, breads) & simple sugars (glucose, chocolate, sweets, fruit)	**Minerals** – Maintains healthy bodily functioning. i.e. iron and calcium e.g. Protects against heart disease.
Fats – Secondary energy source & provides insulation. i.e. Saturated fats (butter) & unsaturated fats (vegetable oil)	**Vitamins** - 1. Prevents disease / illness / maintain health 2. (Helps) produce energy 3. Essential for metabolism or helps for growth/repair/development Maintains a healthy immune system. i.e. vitamin A, C, D
Proteins – Help growth and repair of muscles e.g. hamstrings, cardiac muscle. i.e. eggs, meat, fish, nuts and oats	Vitamins- e.g. Fruit, vegetables
Fibre – Aids digestion of food/large intestine function, helps reduce cholesterol, limit obesity/diabetes and limit certain cancers or help prevent disease. *i.e.* Fruit vegetables, wholemeal bread, beans, lentils, cereals , brown bread	
Water – Carries nutrients in the body, Helps with digestion/waste removal, Regulates body temperature,Avoid dehydration and help replaces lost fluid (from urine and sweat),To quench thirst, To offset fatigue or to prevent heat exhaustion	

e.g. *After a hard training session, it is vital that Carbohydrates are consumed after to replenish the energy expired and aid the recovery process.*

7. How do the nutritional requirements change for different athletes?

- Long Distance Runner
- Will need a high Carbohydrate Diet **(Carbo-Loading)**
- Increase stores of glycogen / energy
- Ability to work at a higher intensity for longer

- Weight lifter
- High Protein Diet
- Aid in the repair and growth of muscles
- Recover quicker leading to training more and becoming stronger.

PAPER 2 ALL SAINTS' ABSOLUTE 3.2 Commercialisation of sport

Key terms:

1. **Commercialisation – refers to the influence of buying and selling, trade or industry to make a profit.**
2. **Sponsorship-** The giving of **money or goods** to performers in order to get good publicity and/or **increase profit**

Different types of sponsorship:

1. Facilities
2. Clothing and equipment
3. Financial

Different types of media:

1. Social e.g. Tiktok, Instagram.
2. Internet e.g. google, BBC I player, YouTube.
3. TV/films e.g. Sky Sports News, ski Sunday,.
4. Radio e.g. Radio 5 live
5. Newspapers/ magazines/ print media e.g. 442, Triathlon, women / men's health
6. Online gaming e.g. FIFA

GOLDEN TRIANGLE

The links and relationship between sponsorship, sporting events and the media.

1.Includes sport and sponsorship and media
2.All factors show interdependence / links / connections
3.Influence of the media in making sport more commercial by providing sponsorship opportunities or to make more money for commerce/industry
4 Influence of sponsorship and media provides more money for sport
5.Influence of sport and sponsorship provides more money for the media

For example, Nike sponsors women's Netball- which then gets more media coverage leading to increased popularity in the sport, in turn increasing the level of sponsorship.

NEGATIVE influences of media include

-Only main sports shown, so minority sports do not gain exposure. E.g. --Media shows few disability sports
-Media highlights only narrow range of sports
-Media focuses on more male sport. E.g. Sky Sports and BT sport show many more men's football matches than female football matches, however they are now beginning to show more female football matches.
-Media could give false information /fake news about sport
-More money to major sports and performers, so less funds to minority sports.
-Media may give sport a bad image due to poor behaviour/deviance.
-Expose potential danger/ bad injury of some activities. E.g. If you hear or see an injury from a sport you may decide not to take part in that sport, for example a cricket batter being hit by the ball in the head and suffering from concussion.
-Role models behaviour is exposed, poor behaviour on and off the performance area is exposed, and quickly.
-The exposure/advertising of some sponsors may be unethical. Examples include alcohol, smoking products and gambling companies.
-Pay per view channels/events may make it difficult for low-income families to watch their favourite sports.
-Where games/events are shown live, spectators may chose to watch on television rather than go to the live game as it is cheaper and they get a better experience from replays, pundits etc.
-May hinder participation / produces couch potatoes or rather watch than participate E.g. With so much sporting content available to watch now people may choose to watch sport as opposed to playing the sport themselves.

Positive influences of media include

-More education/ through raising awareness/ interest/ exposure. E.g. BBC showing the women's football FA Cup final to increase awareness of the sport and give exposure to the players.
-Improving information / guidance e.g.
-By entertaining or making sport exciting e.g. Fast 5 netball, football holograms
-Giving info on new / other sports
-Raises confidence in trying a sport as they see people succeed
-Positively associated with health and fitness E.g. People will see athletes who are healthy and will want to recreate their image and health status.
-May encourage those with disabilities to take up sport if seen on TV. E.g. Increased media coverage of disability sports such as the Paralympic games will increase awareness of the different opportunities available and provide role models to follow within those sports.
-Produce role models who inspire participation. E.g. People will aspire to emulate sporting stars they see through the media and will want to take part in sport to replicate what they have seen/heard the athlete perform.
-Highlight minority/new/female sports – which will increase popularity e.g. Womens' Euros
Rules have been adapted to increase the speed of play and increase excitement. E.g you can now score on any play, not just your serve.

2. Advantages and disadvantages of commercialisation

PLAYER/PERFORMERS

Advantages	Disadvantages
• It provides money to train / compete/competitions fees or enables participant to train full-time • Can lead to additional roles post playing career within the sport. • It provides money for a place at University coaching/sports science support • Pays for equipment, or specialist clothing. • Makes the player more high profile/more famous which increases their marketability. • Increased earnings due to sponsorship	• Sponsors can put pressure on performers which could lead to deviant behaviour/poor performance/mental health issues.. • Generally, favours male over female and able bodied over disabled. • Sponsorship might be short term or can be withdrawn. • Sponsorship if immoral/unethical /unhealthy / alcohol / fast food etc brand **therefore** can give bad image on the performer. • Athletes may be forced to wear kit/equipment even if they don't want to.

SPORT

Advantages	Disadvantages
• Raises the profile of the sport due to increased exposure. The media can educate/raise awareness/interest in sport. • Changes to sport format/rules to make audience friendly.	• Tends to only support the popular sports. • The influence of TV has caused an increase in adverts and changed TV timings (traditions lost) • Rules changes • 2016 netball rule changes to make game faster and more attractive to television companies & viewers • Adapted versions of sports e.g. Fast 5 netball • Event time changes- Live Football/ Rugby being shown on different days • Sponsors can be controlling/restrict other income (only one sponsor per event) • Sponsorship if immoral/unethical /unhealthy / alcohol / fast food etc brand **therefore** can give bad image on the sport.

SPECTATOR

Advantages	Disadvantages
• Offers a wider choice of sports available to watch. • Viewing experience has ben enhanced due to technology	• Encourages spectating not participating. • Can become very expensive for fans/spectators. • Affects view experience - increased TV breaks.

SPONSOR

Advantages	Disadvantages
• Raise awareness of brand leading to increased sales • Displays goodwil • Free tickets for sponsors • Tax concessions • Their products get an attractive, fitness or health related image.	• Poor behaviour from athletes/clubs causes negative media attention. • Some sponsors are not suitable to be promoted within sport. i.e. tobacco.

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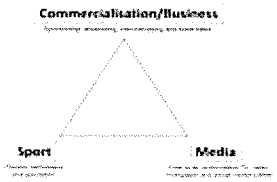

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Sponsorship or Media	Wider impact to the sport	Wider impact to the athlete
Super Sunday Football • Sky Sports • Ford 	Match timings have been changed to suit the television. Tradition was Saturday afternoon, now football is televised nearly all week.	Footballers have to be prepared to play any day of the week. This means their weekly schedule may be different every week.
All England Open 2018 • Yonex 	Rules have been adapted to increase the speed of play and increase excitement. E.g you can now score on any play, not just your serve.	Players have to adapt to playing by different rules. This may mean extra coaching hours, and mistakes being made due to playing by old rules.
National Football League (NFL) A range of sponsors: • Nike, Pepsi Oakley 	Engagement and popularity of the sport has been affected due to the lengthy game times.	Players have to be engaged with the game for a longer period of time due to long advertisement and media.

*The influence of the media on the commercialisation of physical activity in sport:
1. Event changes 2. Rule changes 3. Adapted versions of sports 4. Technological innovations e,g, Hawkeye in Tennis/ VAR in Football 5. Increase Sponsorship.

2. Advantages and disadvantages of commercialisation

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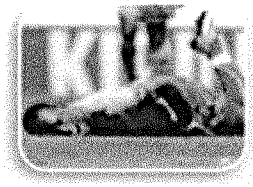
PAPER 2 ALL SAINTS ABSOLUTE 3.3 Ethical and socio-cultural issues in physical activity and sport

Ethics in Sport

1. Sportsmanship – the qualities of fairness and following the rules. *i.e. shaking hands after a football match (must use a named sport).*

Places or times in a game situations when sporting gestures are expected:



e.g. When an injury occurs in football the ball is kicked out of play.

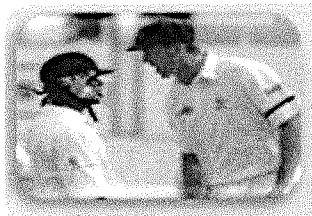
e.g. After a match of rugby, both teams for a 'tunnel' and clap each other off the pitch.

e.g. When a team wins in any sport, players should be gracious and shake hands to offer commiseration.

e.g. At all times, players and referees are expected to control their behaviour, language and manner.

There has been a huge decline in sportsmanship in recent years due to: a large emphasis on winning, media hyping up events and rivalry, and increased wages

2.Gamesmanship – **Bending** the rules to gain an advantage *i.e. fainting injury to waste time*



e.g. Sledging is used in cricket to directly insult the opposing player in the hope to distract the player.

e.g. Grunting can be a technique used in tennis to distract the opposing player.

e.g. Grabbing in boxing is sometimes used to halt time but can frustrate the opposing player.

	Effect on the sport/players	Effect on the spectators
Sportsmanship	• Creates a good sporting environment • Players enjoy the game	• Produces positive role models • Positive image for sport.
Gamesmanship	• Irritates players and causes retaliation	• Produces bad role models

Drugs in Sport

Drug	Reason for athlete taking this	Health risk	Sporting example who might use it
Beta Blockers	Slows heart rate, calms and steadies hands, reduces anxiety.	Lowers blood pressure and oxygen delivery to muscles	e.g. Snooker player that requires a steady hand Archery, shooting, darts, golf
Anabolic Steroids	Promote muscle growth and promotes a faster recovery time	High blood pressure, aggressive behaviour & develops male features	e.g. A Weightlifter that requires maximum strength
Stimulants	Increased alertness/ concentration and reduce tiredness	Heart rate irregularities & increased aggression.	e.g. A sprinter or football player that requires increased focus.

Reasons for taking an illegal performance drug

1. Improve physical fitness / function / strength/speed/power
2. To be able to trainer harder / longer / faster recovery
3. To build muscle mass
4. To lose weight
5. To reduce pain
6. To lower anxiety / steady nerves / lower arousal/ lower HR
7. To increase motivation / determination / arousal / alertness
8. To increase aggression
9. Because they perceive/feel that others are taking them or otherwise they will feel at a disadvantage
10. They think they can get away with it / they will not get caught
11. Pressure from coaches/media

3. Deviance in sport – Deliberate and dangerous breaking of the rules. This type of behaviour causes negative role models. i.e. drug taking, fighting in football or match fixing.

Consequence of Deviant Behaviour

1. Punishment – red card/sin bin/bans
2. Loss of sponsors / contracts with clubs
3. Damaging own reputation or club/country

Player Violence: Controlled aggression is a fundamental part of any sports. Sometimes, however, this spills over into uncontrolled situations where serious injury is caused.

Reasons for Violent Behaviour

- Pressures of the media
- Frustration as a result of losing
- Sponsorships deals
- Pressure from spectators / opponents
- As a reaction to a challenge/tackle
- Annoyed by poor decisions by officials
- To gain an advantage / to hurt your opponent controlled aggression may be required for effective play
- As a result of the influence of drugs

Case Study Example

In 2014, Luis Suarez (a professional football player) was found guilty of biting an opponent for the 3rd time in his career. He was suspended and fined.

Absolute BTEC PE- Component 3 LAA

A1 Physical Components of Fitness

1.Component	Explanation	Suitable Sport or PA
Aerobic Endurance	The ability to exercise at moderate intensity for extended periods of time.	Events/sports lasting more 30 minutes.
Muscular Endurance	The ability of a given muscle to exert force, consistently and repetitively, over a period of time	Events/sports lasting more 30 minutes.
Muscular Strength	The ability of a muscle to exert a maximal or near maximal force against an object.	Activities requiring force, e.g., throwing events
Flexibility	The ability of a joint or series of joints to move through an unrestricted, pain free range of motion.	Activities requiring a wide range of movement around a joint, e.g., gymnastics, martial arts.
Body Composition	The percentage of fat, bone, and muscle in your body.	Low body fat: gymnastics, long distance running. High muscle mass: sprinters, power activities.
Speed	The ability to move the body in one direction as fast as possible.	Activities requiring fast movement, e.g., sprinting

Absolute BTEC PE- Component 3 LAA

A1 Skill Related Components of Fitness

2.Component	Explanation	Suitable Sport or PA
Power	The product of force multiplied by distance, divided by time.	Activities requiring explosive movement e.g., gymnastics, basketball.
Agility	The ability to rapidly change body direction, accelerate, or decelerate.	Activities requiring quick changes of direction, e.g., dodging the opposition in a team game, freestyle skiing.
Co-ordination	The body's ability to perform smooth and efficient movements	Any activity requiring the movement of two or more body parts and can include the use of sporting equipment, e.g., hand, eyes, and tennis racquet to connect with the tennis ball.
Balance	The ability to retain the centre of mass above the base of support when stationary (static balance) or moving (dynamic balance).	An activity requiring the control of the distribution of weight or to remain upright and steady.
Reaction time	How fast an athlete can respond to stimulus.	Any activity where a quick decision or response to a stimulus is needed.

Principles of Training		
Frequency	The number of training sessions completed over a period of time, usually per week. How often.	e.g. Training muscular strength 2/3 sessions a week
Intensity	How hard an individual will train.	e.g. working at 90% HR therefore training anaerobically.
Time	How long an individual will train for.	60 minute session.
Type	The method of training or exercises to meet the requirements.	Weight training to improve strength

A2 Additional Principles of Training		
Progressive Overload	In order to progress, training needs to be demanding enough to cause the body to adapt, improving performance.	Extra stress is needed on the bodies system for adaptations to take place.
Specificity	Training should meet the needs of the sport, or physical/skill-related fitness goals to be developed.	To ensure that the correct component of fitness is being trained so that improvements take place.
Individual Differences	Training should meet the needs of an individual.	For example if they are older or overweight you will need more low impact exercises.
Adaptations	Changes to the body due to increased training loads.	e.g. increasing your strength through a weight training programme.
Reversibility	If training stops, or the intensity of training is lowered, fitness gains from training is lost.	Overtraining, when too much training takes place can cause injury. When you stop training muscle mass can be lost.
Variation	Altering types of training to avoid boredom and maintain motivation to train.	Keep motivation and enjoyment. Less likely to become bored. Provides challenges. Reduces injury through using the same muscles.
Rest and Recovery	To allow the body to recover and adapt.	To prevent injury, ensure training adaptations take place, recover before the next session.

A3 Measurements/ Calculations and Formulas

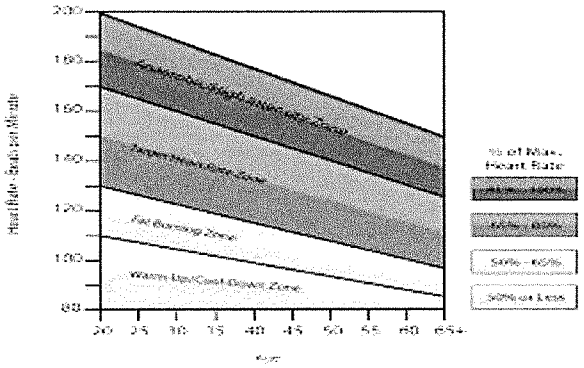
Intensity	
HR- How many times the heart beats within a minute, Beats Per Minute (BPM)	Count radial pulse with two fingers For 15 seconds x 4 = HR
Max HR- An average of what someone's maximum heart rate is depending on their age.	220- Age = Max HR
Training Zones- The target ranges (of heart rate, pace or perceived exertion) that will be used to prescribe workout intensity	MAX HR Divided by 100 x the training zone % Example 16 year old – 204/100 x 85 = 204/100 x 65 =
Strength and Endurance Calculation	
1RM (1 Repetition Max) Used to measure muscular strength	How much weight can be lifted in one repetition.
15RM (15 Repetition Max) Used to measure muscular endurance	How much weight can be lifted in fifteen repetitions.
Borg Scale- Rating of Perceived Exertion (RPE) Scale	
Borg Scale is a way of measuring physical activity intensity level. Perceived exertion is how hard you feel like your body is working.	Rate yourself on a scale of 6-20 depending on your perceived exertion. This value is then x10 for example 12on the scale would equal 120BPM.

Used to:

Monitor Heart Rate- Record Calories- Energy usage- Identify Training Zones

A3 Target Zones

Anaerobic Training Zone 85%-100%	Used for improving speed, power, muscular strength
Aerobic Training Zone 65%- 85%	Used for improving aerobic endurance and muscular endurance



6	No exertion
7	
8	
9	
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard (heavy)
16	
17	Very hard
18	
19	
20	Maximal exertion

Technology to Measure Exercise Intensity

Heart Rate Monitors	
Smart Watches	
Apps	

Investigate IMPORTNACE of fitness testing to determine fitness levels

B1 Reasons for Fitness Testing

1. Gives baseline data: If an athlete completes a test at the beginning and then at the end of their training programme, they can monitor their performance and see if they are improving.
2. Design training programmes: Athletes and coaches can use the results of fitness test and plan training programmes specifically to improve their weaknesses.
3. Determine if training programmes are working Tests can be used as a mid-point in training programmes.
4. Results can give a performer something to aim for: They can provide goal setting aims and give them motivation to improve.

B1 Pre-Test Procedures

1. **Calibration of equipment:** Equipment should be checked for wear and tear and damage; measuring must be completed with a tape measure and secured do the distance doesn't change throughout the test.
2. **Complete informed consent:** Informed consent is completed by the participant and allows them to understand what and how they will be tested and know they can remove themselves from the test at any time.
3. **Complete physical activity readiness questionnaire (par-q):** This is completed to ensure the participant is fit and healthy to take part in the test.
4. **Participant pre fitness test check e.g. Prior exercise participation:** This includes checking jewellery, clothing, trainers and completing a warmup.

B1 Validity of Results

1. Validity refers to whether a test measures what it aims to measure. If we are aiming to test flexibility however when we are performing the sit and reach and bending our legs the test becomes invalid.
2. Often in our tests to ensure it is valid we perform the test three times to see if we are getting similar results each time.
3. For example, the standing long jump can be completed three times and the highest score taken. However, this cannot happen with the copper run due to the length of the test and the impact it will have on the reliability of the test as the participant will be tired during the second and third time.

B1 Reliability of Test

B1 Factors affecting reliability:

1. Calibration of equipment: For example, if person administering the test has not measured out the 400m Cooper run correctly, when the athlete uses the nominal data their scores will be incorrect.
2. Motivation of the participant: If the participant is unwell or isn't trying their best, they will not receive accurate results.
3. Conditions of the testing environment (inside versus outside conditions) If the ground is wet when testing agility, it will be hard for the participant to change direction without falling over.
4. Experience of the person administering the test – compliance with standardised test procedure. If the administrator stops the stopwatch at the correct time the results will be incorrect.

B1 Absolute BTEC PE - Component 3 LAB

B1 Practicality

1. **Cost:** Specialist equipment and facility hire can be expensive to carry out the tests.
2. **Time taken to perform the test:** Tests like the cooper run and multistage fitness test can take a long time to perform.
3. **Time taken to set up the test:** Measuring for test such as the Cooper run, Sprint test and Illinois test can be difficult and time consuming.
4. **Time taken to analyse data:** Collecting and analysing large cohorts of data can be very time consuming and if you are conducting more than one type of test.
5. **Number of participants:** Some tests require specific equipment and if you have 30 participants to complete the test however on one piece of equipment this is not practical.

B1 Interpretation of Fitness Test Results

In your exam you will need the following skills

1. To be able to compare results to normative published data: normative data is results taken from people of similar ages and finding out what the average norm is for that age and sex. For Example normative data for the cooper run, female and a range of ages. Not all tests have normative data is they aren't common/ popular tests

Age	Excellent	Above Average	Average	Below Average	Poor
13-14	>2000m	1900-2000m	1600-1899m	1500-1599m	<1500m
15-16	>2100m	2000-2100m	1700-1999m	1600-1699m	<1600m
17-20	>2300m	2100-2300m	1800-2099m	1700-1799m	<1700m
20-29	>2700m	2200-2700m	1800-2199m	1500-1799m	<1500m
30-39	>2500m	2000-2500m	1700-1999m	1400-1699m	<1400m
40-49	>2300m	1900-2300m	1500-1899m	1200-1499m	<1200m
>50	>2200m	1700-2200m	1400-1699m	1100-1399m	<1100m

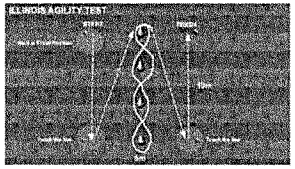
2. Analyse and evaluate test results: Understanding where an athlete's success and weaknesses are based on the results of their tests.

3. Make recommendations for improvements to fitness performer based on test results: This could be a specific type of training which is linked to the

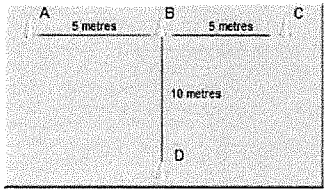
B2 Absolute BTEC PE - Component 3 LAB:

Fitness test methods for components of Skill-related fitness

Agility



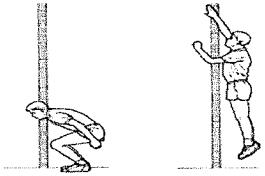
Illinois agility run test



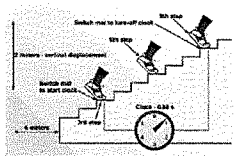
T Test

The Illinois and T test are used to examine the participant's ability to change direction at speed and remain in an upright position.

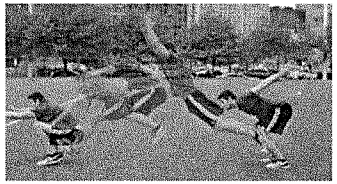
Power



Vertical Jump Test



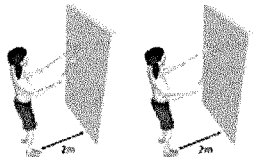
Margaria- Kalamen Test



Standing Long/Broad Jump

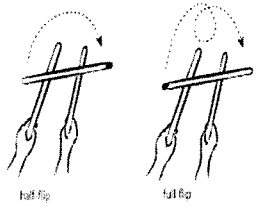
These tests are used to examine explosive movements of the legs.

Coordination



Alternate hand wall toss test.

30 seconds

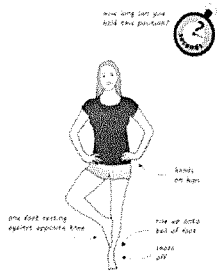


Stick flip test

These tests are used to examine the participants ability to move two or more body parts at the same time smoothly and efficiently, to allow effective application of technique, such as catching the ball or stick.

Balance

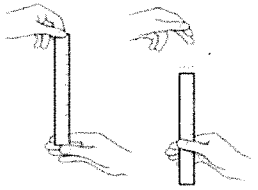
Y balance test



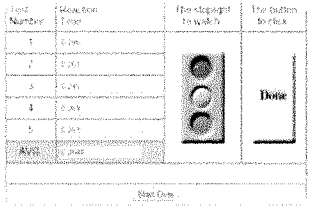
Stork Stand test

These tests are used to examine the participants ability to maintain centre of mass over the base of support, useful to maintain positions in performance sports (static balance) or when on the move in any other sporting examples (dynamic balance).

Reaction Time



Ruler drop test



Online reaction time test

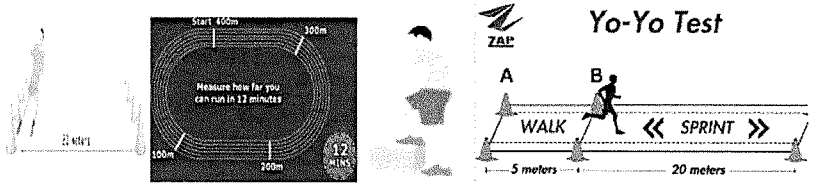
These tests are used to examine how quickly the athlete can respond to a stimulus. In one test the ruler is the stimulus and the quicker athlete catches the ruler. The stimulus on the online test are the lights and the computer examines the speed in which the athlete presses the button.

B3 Absolute BTEC PE - Component 3 LAB:

Fitness test methods for components of Physical fitness

Aerobic Endurance

Multistage Fitness test/ 12 min cooper run/ Harvard step/ Yo yo Test



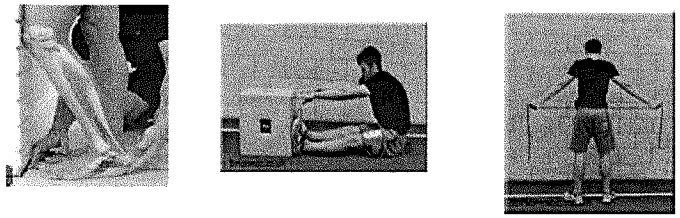
These tests are used to examine the participants ability of the cardiovascular system to provide the muscles with nutrients and oxygen over a long period of time.

Flexibility

Calf muscle flexibility test

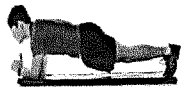
Sit and reach test

Shoulder flexibility test



Each of these tests are used to examine the range of movement at a joint, shoulder hip and ankle joint. There is a range of tests as different sports require flexibility in different joints in the body.

Muscular Endurance



Timed Plank

Sit up Test

Press up Test

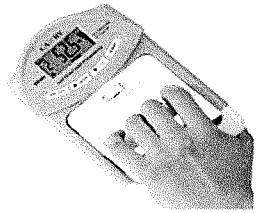
Each test examines how many times the different muscles groups can contract in a length of time.

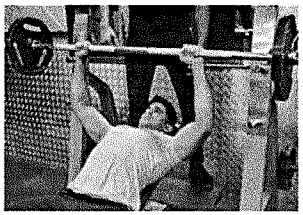
Body Composition

Muscular Strength

Hand Grip Dynamometer

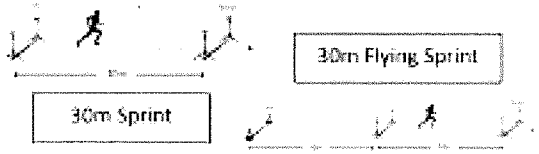
1 Rep Max





These tests are done to examine the amount of force that can be applied against a resistance. For example, the dynamometer tests for strength of grip lower arm and bicep muscle. 1RM test the maximum weight lifted in 1 repetition.

Speed



Two test which both examine distance divided by time to reduce the time taken to move the body or body parts. In this case the fast movements of the arms and legs.

30m Sprint form standing start.

The flying sprint tests the athlete at full speed.

Fitness training methods for physical components of fitness

Appropriate physical fitness training methods that could be used for specific sports participants for different ages and different sporting abilities

Flexibility			**Muscular Endurance**		
Static Active	The performer applies internal force to stretch and lengthen the muscle	Quadricep stretch 	Free weights	High repetitions and low loads	e.g. Bicep curl 10 kg X 15 reps
Static Passive	Requires the help of another person or an object, e.g. A wall to apply external force causing the muscle to stretch	Wall calf stretch 12-20 seconds 	Fixed resistance machines	High repetitions and low loads	e.g. Squat 20 kg X 20 reps
Proprioceptive Neuromuscular Facilitation (PNF)	The technique involves the use of a partner or immovable object, isometric muscle contractions to inhibit the stretch reflex.		Circuit training	Using body resistance exercises or weights with low loads and high repetitions.	Series of different exercise stations can be made sport specific E.g. Press ups, sit ups , squats and lunges.
Muscular Strength Training			**Speed**		
Free Weights	High loads and low repetitions	e.g. Bicep curl 15 kg X 6 reps	Acceleration Sprints	Pace is gradually increased from a standing or rolling start to jogging, then to striding, and then to a maximal sprint	Long jumper run up 
Resistance Machines	High loads and low repetitions	e.g. leg press 60 kg X 6 reps	Interval Training	Work period followed by a rest or recovery period. For speed short, high intensity work periods, increasing the number of rest periods and increasing work intensity.	100m 
Aerobic Endurance			Resistance Drills	Hill runs, parachutes, sleds, bungee ropes, resistance bands	Rugby players 
Continuous Training	Steady pace and moderate intensity for a minimum period of 30 minutes	Jogging 30 minutes on a treadmill between 60-80% Ma HR.			
Fartlek Training	The intensity of training is varied by running at different speeds and/or over different terrain	Jogging 10-minute, sprint 1 minute, run 2 min repeat for 30 minutes.	**Aerobic Endurance**		
Interval training	Work period followed by a rest or recovery period o for aerobic endurance decrease the number/length of rest periods and decrease work intensity (compared to speed training)	Netball players walking back into position after a team has scored.	Circuit Training	Use of a number of stations/exercises completed in succession with minimal rest periods in between to develop aerobic endurance.	Step ups. Shuttle runs and skipping to develop aerobic endurance with minimal rest.

Fitness training methods for skill related components of fitness

Agility			Power		
Speed Agility and Quickness training (SAQ)	drills used to develop physical ability and motor skills.	A football agility SAQ course with changes of direction	**Plyometrics Training**	lunging, bounding, incline press-ups, barrier hopping and jumping.	Hopping/ bounding/ two footed jumps
Co-ordination			**Reaction time**		
Co-ordination Training	Use of specific training exercises using two or more body parts together.	Hand eye- coordination moving the tennis racket to the tennis ball at the right time.	**Reaction Time Training**	Use of specific training exercises to practise quick responses to an external stimulus.	Sprinter responding quickly to the sound of a gun in a sprint start.
Balance					
Dynamic Balance Training Static Balance Training	Use of specific training exercises that require balancing on a reduced size base of support. 	e.g. lunging, standing on one leg and kicking, single leg lunging.  e.g. Handstand, yoga, gymnastics, Pilates.			

C4: Choosing training methods

- Demands of the sport: focus on area of sport or components of fitness involved.
- Cost of equipment: specialist equipment may be needed such as fixed resistance machines.
- Location of training: specific facilities may be needed such as swimming pool.
- Ease of set up: some methods involve setting up e.g. circuit training
- Number of participants: may be limited amounts of space to access

C5: Provision for taking part in fitness training methods

Type of provision	Explanation	Advantages	Disadvantages
Public sectors	include local authorities and school provision	-Funded by local council -Low cost -Accommodate large groups	-Lack of equipment -Poor facilities
Private sector	provided by organisations who aim to make a profit	-specialist services -latest training equipment	-expensive to join -members pay month or yearly -Aime at certain groups of people other than public
Voluntary sector	activities provided by volunteers who have a common interest in the participant.	-fitness or competitive sports -low cost -coaches usually have experience	-opportunities in only one sport -Basica facilities or equipment -Limited training times as they normally don't own the facility.

The effects of long-term fitness training on the body systems

How training methods affect the different body systems, which can lead to adaptations to improve specific components of fitness.

Aerobic Endurance Training:

- Adaptations to the cardiovascular and respiratory systems
- Cardiac hypertrophy
- Decreased resting heart rate
- Increased strength of respiratory muscles
- Capillarisation around alveoli.

Flexibility Training:

- Adaptations to the muscular and skeletal systems
- Increased range of movement permitted at a joint
- Increased flexibility of ligament and tendons
- Increased muscle length.

Muscular Endurance Training:

- Adaptations to the muscular system
- Capillarisation around muscle tissues increased muscle tone.

Muscular Strength and Power Training:

- Adaptations to the muscular and skeletal systems
- Muscle hypertrophy
- Increased tendon and ligament strength
- Increased bone density.

Speed Training:

- Adaptations to the muscular system
- Increased tolerance to lactic acid.

Requirements for Each of the Following Fitness Training Methods

To ensure a fitness training plan is carried out safely and effectively it must include the following.

- **Warm-Up:** prior to taking part in the fitness training method – pulse raiser- increase heart rate and body temperature, mobility- increase range of movement and stretch; reduce the risk of injury, prepare the body for exercise.
- **Cool Down:** after taking part in the fitness training method – gradually lower pulse and breathing rate to resting levels; remove lactic acid; stretch to help return muscles to pre-exercise length.
- **Fitness Training Method**: linked to the associated component of fitness.
- **Application of the basic (FITT) and additional principles of training:** to each fitness training method.
- **Application of appropriate training intensities**: to fitness training methods.

Additional requirements for each of the fitness training methods

Advantages and disadvantages

- To include number of people that can take part
- Cost of equipment
- Ease of set up, access to venue/location of training
- Risk of injury to the performer if performed incorrectly, effectiveness of training for given sports performer
- Specificity to component of fitness
- Replicating demands of the sport

D Absolute BTEC PE - Component 3 LAC

D1 Personal Information to Aid Training Fitness Programme Design

Aims – details of what they would like to achieve for the selected sport.

Objectives – how they intend to meet their aims using an appropriate component of fitness and method of training.

Lifestyle and physical activity history.

Attitudes, the mind and personal motivation for training.

D2 Use Personal Information to Aid Training Programme Design.

Selection of appropriate training method/activity for improving/maintaining the selected components of physical and/or skill-related fitness.

Application of the FITT principles and additional principles of training.

D3 Motivational Techniques for Fitness Programming

Motivation – the internal mechanisms and external stimuli that arouse and direct behaviour.

Two types of motivation:

Intrinsic- From within e.g. I want to go to the gym because its good for me.

Extrinsic – from the outside e.g. Rewards

Principles of setting goals to increase and direct motivation.

Personal goals – (SMARTER):

Specific: The goal must be specific to what you want to achieve, e.g. I want to improve upper body strength

Measurable: Goals must be stated in a way that is measurable, I want to increase my chest press 1RM to 100kg.

Achievable: The person has to have access to training and the time to take part in it in order to meet the goal.

Realistic: It must be possible to actually reach this goal and not expect improvements beyond what can be achieved in the time frames and current fitness or ability or ability level of the person setting the goals.

Time: Their must be a set time or deadline on the goal. This means you can review your success. It is best you put the date you wish to achieve the goal by.

Exciting: The goal must be something the person really wants to achieve and have an impact on their sports performance in order for them to be motivated to attend their regular training and work hard while training to achieve the goal.

Recorded: The results should be written down so the performer can see how close they are to achieving their goal and how long it takes to reach it

Goals:

Short-term goals (set over a short period of time, between one day and one month)

Long-term goals (what they want to achieve in the long term, and the best way of doing this).

- Influence of goal setting on motivation: Provide direction for behaviour, maintain focus on the task in hand
- Benefits of motivation on the sports performer: Increase participation
- Maintain training and intensity Increased fitness Improved performance.