

Subject Key Information

ENGLISH

For English please use GCSE Pod as your main Literature tool, for Language please read short stories and new articles (these can be online).

“Blood Brothers” resources are in this booklet .

Please come along to Period 6 for “A Christmas Carol” revision.

MATHS

There are help sheets in this booklet for foundation and higher. Please try and remember them and don't forget your online learning.

SCIENCE

We have enclosed revision topics and links in this booklet for you to read. Again don't forget all your revision booklets and online work.

RE

We have enclosed some different revision techniques, please don't forget revision booklets also.

HISTORY

For History revision, use GCSE Pod this will give you revision help and links to help get you ready for your exams. Also don't forget revision guides/booklets. There are plenty of revision techniques in this booklet to help you.



GEOGRAPHY

As always, please use GCSE Pod to aid your revision. Another good source is the internet Geography site – there are lots of information and case studies on there. Don't forget your CGP revision guides and BBC Bitesize.

FOR ALL OTHER SUBJECTS

For all other subjects don't forget all revision guides, online work like GCSE POD, websites and testing yourselves with a study buddy. If you have any questions relating to any of your subjects then please do not hesitate to ask your teachers.



English

Literature unit 2 exam overview

Candidates are not permitted to take copies of the text into the exam.

Exam date: Length of exam: 2 hours What will be on the exam? Section A: Contemporary Drama Section B: Literary Heritage Prose	Each section is split into 2 parts: a) A short extract of text followed by a question. Time: 20 mins a) A choice of two essay-style question. Time: 40 mins
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Assessment objectives for this exam:

AO1 Respond to texts critically and imaginatively; select and evaluate relevant textual detail to illustrate and support interpretations.

AO2 Explain how language, structure and form contribute to writers' presentation of ideas, themes and settings.

AO1 (B - C Mark scheme) - Candidates: • make more detailed reference to text; • discuss thoroughly, and increasingly thoughtfully, characters and relationships; • probe the sub-text with increasing confidence; • select and evaluate relevant textual details; • understand and demonstrate how writers use ideas, themes and settings to affect the reader; • convey ideas clearly and appropriately.	AO2 (B - C Mark scheme) - Candidates: • see how different aspects of style and structure combine to create effects; • show increasingly clear appreciation of how meanings and ideas are conveyed through language, structure and form.
AO1 (A - A* Mark scheme) - Candidates: • make increasingly assured selection and incorporation of relevant detail; • are able to speculate/offer tentative judgements; • are able to evaluate characters/relationships and attitudes/motives; • at the highest level, consistently handle texts with confidence, have an overview and ability to move from the specific to the general; • convey ideas persuasively and cogently with apt textual support.	AO2 (A - A* Mark scheme) - Candidates: • show appreciation of how writers use language to achieve specific effects; • make assured exploration and evaluation of the ways meaning, ideas and feeling are conveyed through language, structure and form; • at the highest level, make assured analysis of stylistic features.

Blood Brothers Context

Liverpool

Liverpool, because of its position on the River Mersey, was a prosperous seaport in the 19th century.

It is a city of many contrasts.

In the 20th century, because of the silting of the river, it was a place of financial depression, which led to unemployment and strikes.

There was a big gap between the rich and the poor.

The People of Liverpool

Liverpudlians are known for their warmth, hospitality and wit.

Liverpool is also famous for its football teams and impact on culture – the Mersey Beat (poetry), the Beatles (music) and playwrights, architects etc.

Mrs Johnstone's wit and warmth typify these qualities.

Unemployment

Unemployment reached 25% in the 1980s.

At the time the play is set, factories were closing down. At the start of act 2, Sammy is already on the dole, and the song 'Take a Letter Miss Jones' illustrates how this rising unemployment adversely affects Mickey's life and tempts him into crime.

Being out of work creates low self-esteem; particularly for traditional men who feel they need to support their family.



Views at the time

Blood Brothers is set in Liverpool, between the 1950s and the 1970s.

At the time, people strongly disapproved of sex before marriage and this is why Mrs Johnstone 'has to' marry quickly.

Divorce was uncommon and this is another reason the neighbours might disapprove of her.

Education

Although the 1945 Education act had made grammar schools free, working class children had to pass the 11+ to gain entry to the grammar schools. The pass mark was kept deliberately high. Few children were allowed the privilege of a grammar school education, and even if they gained a place, there was no guarantee that they would leave with qualifications, as the school leaving age was 15.



- Grammar Schools

Pupils at grammar schools studied academic subjects and took O levels. Some went on to take A levels, while others were under pressure from parents to leave school, get a job and bring money into the household.

There were far fewer university places then, so most would go into employment after school.

- Secondary Modern Schools

Children who failed the 11+ would go to a secondary modern school to be prepared for life in the trades. Boys would study practical skills like bricklaying, alongside academic work, and girls would learn how to cook. Many of these schools were under-funded.

- **Qualifications**

If pupils were not considered 'bright' they were not allowed to take CSEs. These qualifications were not worth as much as O Levels, taken at grammar school. (GCSEs are much more inclusive) So it was common for children to leave school without any qualifications at all. It was more difficult for them to get on in life.

Poverty

There is a clearly established link between poverty and under-achievement at school. Edward is sent to a private, fee-paying boarding school and will take O levels, A levels and go on to university.

Mickey leaves school and goes into employment; things go wrong when he is made redundant, whereas Edward has a much more secure 'white collar' job. Manual workers were called 'blue collar' workers; they were more affected by closure of factories and the scarcity of work connected with the docks.

Council Housing

Council houses were the homes of most working class people in the 1950s and 1960s. The terraced houses had a lot to recommend them, but they were also cramped and lacked inside toilets and bathrooms. They did not have central heating and were heated mostly by coal fires. Their inner city locations were often dirty and there was nowhere for children to play as they rarely had gardens.



'New' Towns

To improve standards of living, the government moved people away from the terraced houses into new council accommodation in the countryside. 'New' towns were created like Skelmersdale, and existing places were developed, like Runcorn and Winsford. Some high rise blocks were built also.

Bright New Day

Mrs Johnstone's family is certainly helped by their move, although not as much as she had hoped.

In many ways, it is already too late for the older children, and the unemployment situation was often worse away from the city.

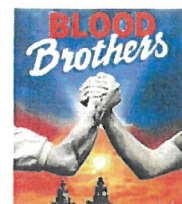
Also, many missed the people and the amenities that they had known before, and the support network that existed all but vanished. Uprooting people can cause stress and depression.

Willy Russell's Aim

One of the playwright's aims is to show us that there are disadvantages to being poor and working class.

The failure to succeed in life is not because of a lack of ability, but a lack of opportunity. This can clearly be seen in Edward and Mickey.

We must ask ourselves whether this is still true in the 21st century.



Blood Brothers Context - Questions

Question	Answer
1. Where is the setting of Blood Brothers?	
2. What qualities are Liverpudlians known for?	
3. Which character typifies these qualities?	
4. What were the unemployment figures in Liverpool during the 1980's?	
5. At what time is Blood Brothers set?	
6. Why might Mrs Johnstone's neighbours disapprove of her?	
7. Find 5 key facts about education during this time.	
8. What was the name given to manual workers?	



Blood Brothers Context - Questions

Question	Answer
9. What type of houses did most working class people live in?	
10. What were the conditions of the Council Houses like?	
11. Why were 'New' towns created?	
12. What was the name of the 'New' town that was created?	
13. What effect did uprooting people have?	
14. What were the aims of the playwright?	
15. Which characters highlight this aim?	



Blood Brothers – Synopsis of the Play

Write a synopsis of the play:

Act 1	Act 2



Blood Brothers – Key Events

List the 10 Key Events of Blood Brothers:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.



Blood Brothers – Characters

	Mrs Johnstone	Mrs Lyons	Mickey	Edward	Linda	Sammy	Narrator
Appearance							
Key events linked to the character							
Key quotes that tell us about the character							
What other people think of the character							
Important themes that the character is linked to							



Blood Brothers – Key Quotes

- Narrator's description on Mrs Johnstone 5
- Description of Mrs Johnstone 5/6
- Mrs Johnstone being poor 6/7
- Mrs Lyons wants children 8
- Mrs Johnstone on superstition 9
- Mrs Johnstone worries about having two new babies 11
- Mrs Lyons asks for a baby 11/12
- Mrs Johnstone is persuaded by Mrs Lyons 13/14
- Mrs Lyons takes the baby 18
- Mrs Lyons wants Mrs Johnstone to leave 21
- Mrs Johnstone wants to take the baby 22
- Mrs Lyons threatens Mrs Johnstone if she tells someone about the pact 23
- Narrator on superstition 23
- Mickey looks up to Sammy 26/27
- Mickey and Edward meet 27/28/29
- Mickey and Edward become Blood Brothers 30/31
- Sammy's description of Edward 31
- Mrs Johnstone meets Edward 32/33
- Mrs Lyons won't let Edward play with Mickey 35/36
- Linda is introduced to Edward 42
- Linda and Mickey tell Edward what to say to the policeman 43
- Mrs Lyons worries about Edward 45
- Mrs Johnstone gives Eddie a locket 50
- Mickey describes Eddie 53
- Eddie describes Mickey 53/54
- The Johnstones move away 56/57
- Linda loves Mickey 67/68
- Mickey loves Linda 71
- Mickey and Eddie are reunited 73
- Edward gives Mickey advice about flirting with Linda 74
- Mrs Lyons confronts Mrs Johnstone 77/78/79
- Narrator describes Mickey, Linda and Eddie growing up 82/83
- Edward leave for university 86/87
- Linda is pregnant 87
- Mickey and Linda get married 89
- Mickey loses his job 91/92
- Mickey agrees to help Sammy 93/94
- Mrs Johnstone explains what happened to Mickey 97
- Mickey starts taking pills 97/98
- Linda hides Mickey's tablets 99/100
- Narrator describes Mickey 103/104
- Mickey threatens to kill Eddie 105/106
- Mrs Johnstone tells Edward and Mickey they are brothers 106
- Narrator questions the audience 107
- Mrs Johnstone is upset by Edward and Mickey's death 107/108

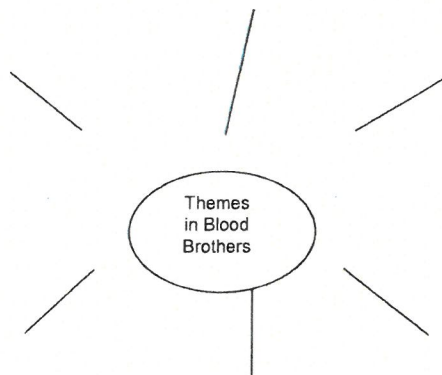
• Themes in Blood Brothers

Task: Identify the key themes highlighted in Blood Brothers from the images in the moviemaker

Complete the mind map on the following page to show the themes from Blood Brothers.

You should try to include:

- Key quotes
- Characters
- Events



Practise Exam Questions

16. *Blood Brothers*

Answer part (a) and **either** part (b) or part (c).

You are advised to spend about 20 minutes on part (a), and about 40 minutes on part (b) or part (c).

- (a) Read the extract on the opposite page. Then answer the following question:

Look closely at how Mr and Mrs Lyons speak and behave here. What does it reveal about their relationship? [10]

Either,

- (b) For which character in *Blood Brothers* do you have the most sympathy? Show how Willy Russell's presentation of your chosen character creates sympathy for him or her. [20]

Or,

- MRS LYONS: Oh Richard, Richard.
MR LYONS: For God's sake Jennifer, I told you on the phone, he'll just be out playing somewhere.
MRS LYONS: But where?
MR LYONS: Outside somewhere, with friends. Edward . . .
MRS LYONS: But I don't want him out playing.
MR LYONS: Jennifer, he's not a baby. Edward . . .
MRS LYONS: I don't care. I don't care . . .
MR LYONS: For Christ's sake, you bring me home from work in the middle of the day, just to say you haven't seen him for an hour. Perhaps we should be talking about you getting something for your nerves.
MRS LYONS: There's nothing wrong with my nerves. It's just . . . just this place . . . I hate it. Richard, I don't want to stay here any more. I want to move.
MR LYONS: Jennifer! Jennifer, how many times . . . the factory is here, my work is here . . .
MRS LYONS: It doesn't have to be somewhere far away. But we have got to move, Richard. Because if we stay here I feel that something terrible will happen, something bad.
MR LYONS *sighs and puts his arms round MRS LYONS.*
MR LYONS: Look, Jen. What is this thing you keep talking about getting away from? Mm?
MRS LYONS: It's just . . . it's these people . . . these people that Edward has started mixing with. Can't you see how he's drawn to them? They're . . . they're drawing him away from me.
MR LYONS, *in despair, turns away from her.*
MR LYONS: Oh Christ.
He turns to look at her but she looks away. He sighs and absently bends to pick up a pair of children's shoes from the floor.
I really do think you should see a doctor.
MRS LYONS: (*snapping*): I don't need to see a doctor. I just need to move away from this neighbourhood, because I'm frightened. I'm frightened for Edward.
MR LYONS *places the shoes on the table before turning to her.*
MR LYONS: Frightened of what, woman?
MRS LYONS: (*wheeling to face him*): Frightened of . . . (*She is stopped by the sight of the shoes on the table. She rushes at the table and sweeps the shoes off.*)

16. Blood Brothers

Answer part (a) and either part (b) or part (c).

You are advised to spend about 20 minutes on part (a), and about 40 minutes on part (b) or part (c).

- (a) Read the extract on the opposite page. Then answer the following question:

With close reference to the extract, show how Willy Russell creates mood and atmosphere for an audience here. [10]

Either,

- (b) Imagine you are Mrs. Johnstone. At the end of the play you think back over its events. Write down your thoughts and feelings. Remember how Mrs. Johnstone would speak when you write your answer. [20]

Or,

- (c) At the beginning of *Blood Brothers*, the narrator's first speech tells the audience how the story ends. How, then, does Willy Russell keep the interest of an audience throughout the play? [20]

We see MRS LYONS staring at a piece of paper. EDWARD is standing before her.

MRS LYONS: (*incredulously*): Suspended? Suspended? (*She looks at the paper.*) Because of a locket?

EDWARD: Because I wouldn't let them have my locket.

MRS LYONS: But what's so . . . Can I see this locket?

There is a pause.

EDWARD: I suppose so . . . if you want to.

EDWARD takes off the locket from around his neck and hands it to his mother. She looks at it without opening it.

MRS LYONS: Where did you get this?

EDWARD: I can't tell you that. It's a secret.

MRS LYONS: (*finally smiling in relief*): I know it's from a girlfriend, isn't it? (*She laughs.*) Is there a picture in here?

EDWARD: Yes, Mummy. Can I have it back now?

MRS LYONS: You won't let Mummy see your girlfriend. Oh, Edward, don't be so . . . (*She playfully moves away.*) Is she beautiful?

EDWARD: Mummy can . . .

MRS LYONS: Oh, let me look, let me look. (*She beams a smile at him and then opens the locket.*)

Music.

EDWARD: Mummy . . . Mummy what's wrong . . . (*He goes to her and holds her steady.*) Mummy!

MRS LYONS takes his arms away from her.

What is it?

MRS LYONS: When . . . when were you photographed with this woman?

EDWARD: Pardon!

MRS LYONS: When! Tell me, Edward.

EDWARD begins to laugh.

Edward!

EDWARD: Mummy . . . you silly old thing. That's not me. That's Mickey.

MRS LYONS: What?

EDWARD: Mickey . . . you remember my friend when I was little. (*He takes the locket and shows it to her.*) Look. That's Mickey . . . and his mother. Why did you think it was me? (*He looks at it.*) I never looked a bit like Mickey.

EDWARD replaces the locket around his neck. MRS LYONS watches him.

MRS LYONS: No it's just . . . (*She stares, deep in thought.*)

EDWARD: (*looking at her*): Are you feeling all right Mummy? You're not ill again, like you used to be . . . are you?

MRS LYONS: Where did you get that . . . locket from, Edward? Why do you wear it?

EDWARD: I can't tell you that, Ma. I've explained, it's a secret, I can't tell you.

MRS LYONS: But . . . but I'm your mother.

EDWARD: I know but I still can't tell you. It's not important, I'm going up to my room. It's just a secret, everybody has secrets, don't you have secrets?

16. *Blood Brothers*

Answer part (a) and either part (b) or part (c).

You are advised to spend about 20 minutes on part (a), and about 40 minutes on part (b) or part (c).

- (a) Read the extract on the opposite page. Then answer the following question:

Look closely at how Edward and Mickey speak and behave here. What does it reveal about them at this point in the play? [10]

Either,

- (b) Give advice to the actor playing Mickey on how you think he should present the character to an audience. [20]

Or,

- (c) At the end of the play the Narrator says, "And do we blame superstition for what came to pass?" How important do you think superstition is in affecting the outcome of the play? [20]

Bored and petulant, MICKEY sits and shoots an imaginary Sammy.

EDWARD, also aged 'seven' appears. He is bright and forthcoming.

EDWARD: Hello.

MICKEY: *(suspiciously)* Hello.

EDWARD: I've seen you before.

MICKEY: Where?

EDWARD: You were playing with some other boys near my house.

MICKEY: Do you live up in the park?

EDWARD: Yes. Are you going to come and play up there again?

MICKEY: No. I would do but I'm not allowed.

EDWARD: Why?

MICKEY: 'Cos me mam says.

EDWARD: Well, my mummy doesn't allow me to play down here actually.

MICKEY: 'Gis a sweet.

EDWARD: All right. *(He offers a bag from his pocket.)*

MICKEY: *(shocked)* What?

EDWARD: Here.

16. *Blood Brothers*

Answer part (a) and either part (b) or part (c).

You are advised to spend about 20 minutes on part (a), and about 40 minutes on part (b) or part (c).

- (a) Read the extract on the opposite page. Then answer the following question:

Look closely at how Linda speaks and behaves here. How might it affect an audience's feelings towards her? [10]

Either,

- (b) What do you think about Mrs. Lyons and the way she is presented to an audience? [20]

Or,

- (c) How does Willy Russell present the theme of social class in *Blood Brothers*? [20]

MICKEY: *(trying to work out the catch. Suspiciously taking one)* Can I have another one. For our Sammy?

EDWARD: Yes, of course. Take as many as you want.

MICKEY: *(taking a handful)* Are you soft?

EDWARD: I don't think so.

MICKEY: Round here if y' ask for a sweet, y' have to ask about, about twenty million times. An 'y' know what?

EDWARD: *(sitting beside MICKEY)* What?

MICKEY: They still don't bleedin' give y' one. Sometimes our Sammy does but y' have to be dead careful if our Sammy gives y' a sweet.

EDWARD: Why?

MICKEY: 'Cos, if our Sammy gives y' a sweet he's usually weed on it first.

EDWARD: *(exploding in giggles)* Oh, that sounds like super fun.

MICKEY: It is. If y' our Sammy.

EDWARD: Do you want to come and play?

MICKEY: I might do. But I'm not playin' now 'cos I'm pissed off.

EDWARD: *(awed)* Pissed off. You say smashing things don't you? Do you know any more words like that?

MICKEY and LINDA are in their new house. In the lounge LINDA is preparing MICKEY's working things.

LINDA: *(Shouting)*: Mickey, Mickey, come on, you'll be late . . .

MICKEY enters his house.

MICKEY: Where's me . . .

LINDA: Here . . . here's y' bag. Y' sandwiches are in there . . .

He ignores the bag and begins looking through a cupboard drawer.

Mickey, what y' lookin' for?

MICKEY: Y' know what I'm lookin' for.

LINDA: Mickey, Mickey listen to me . . .

MICKEY: Where's me tablets gone, Linda?

LINDA: Mickey you don't need your tablets!

MICKEY: Linda!

LINDA: Mickey. You're workin' now, we're livin' on our own – you've got to start makin' an effort.

MICKEY: Give them to me, Linda.

LINDA: You promised.

MICKEY: I know I promised but I can't do without them. I tried. Last week I tried to do without them. By dinner time I was shakin' an' sweating so much I couldn't even work. I need them. That's all there is to it. Now give.

MICKEY: Yeh. Yeh, I know loads of words like that. Y' know, like the 'F' word.

EDWARD: *(clueless)* Pardon?

MICKEY: The 'F' word.

EDWARD is still puzzled. MICKEY looks round to check that he cannot be overheard, then whispers the word to EDWARD. The two of them immediately wriggle and giggle with glee.

EDWARD: What does it mean?

MICKEY: I don't know. It sounds good though, doesn't it?

EDWARD: Fantastic. When I get home I'll look it up in the dictionary.

MICKEY: In the what?

EDWARD: The dictionary. Don't you know what a dictionary is?

MICKEY: 'Course I do . . . It's a, it's a thingy innit?

EDWARD: A book which explains the meaning of words.

MICKEY: *(trying to work out the catch. Suspiciously taking one)* Can I have another one. For our Sammy?

EDWARD: Yes, of course. Take as many as you want.

MICKEY: *(taking a handful)* Are you soft?

EDWARD: I don't think so.

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EDWARD: *(sitting beside MICKEY)* What?

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EDWARD: Do you want to come and play?

MICKEY: I might do. But I'm not playin' now 'cos I'm pissed off.

EDWARD: *(awed)* Pissed off. You say smashing things don't you? Do you know any more words like that?

Pause.

LINDA: Is that it then? Are y' gonna stay on them forever?

MICKEY: Linda.

LINDA: Look. We've . . . we've managed to sort ourselves out this far but what's the use if . . .

MICKEY: We have sorted ourselves out? Do you think I'm really stupid?

LINDA: What?

MICKEY: I didn't sort anythin' out Linda. Not a job, not a house, nothin'. It used to be just sweets an' ciggies he gave me, because I had none of me own. Now it's a job and a house. I'm not stupid, Linda. You sorted it out. You an' Councillor Eddie Lyons.

LINDA doesn't deny it.

Now give me the tablets . . . I need them.

LINDA: An' what about what I need? I need you. I love you. But, Mickey, not when you've got them inside you. When you take those things, Mickey, I can't even see you.

MICKEY: That's why I take them. So I can be invisible. *(Pause.)* Now give me them.

Music. We see LINDA mutely hand MICKEY her bag.

MICKEY quickly grabs the tablets.

MICKEY exits.

The NARRATOR enters.

The NARRATOR watches LINDA. She moves to telephone, but hesitates.

NARRATOR: There's a girl inside the woman
Who's waiting to get free
She's washed a million dishes
She's always making tea.

LINDA: *(speaking on the 'phone)* Could I talk to Councillor Lyons, please?

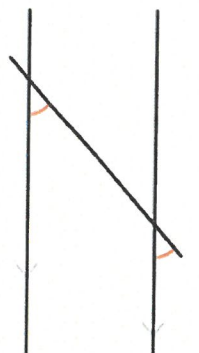
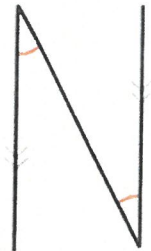
$$a^0 = 1$$

Alternate Angles

$$a^{-n} = \frac{1}{a^n}$$

$$a^n = \sqrt[n]{a}$$

Corresponding Angles



$$(x+7)(x-2)$$

'See a bracket, multiply it out'

'Don't see a bracket, put it in!'

'Cherry Pies Delicious, Apple Pies R 2'

$$C = \pi \times d$$

$$A = \pi r^2$$

$$a^m \times a^n = a^{m+n}$$

$$a^m \div a^n = a^{m-n}$$

$$(a^m)^n = a^{m \times n}$$

Equations - 'chuck rubbish over the fence!'

Inequalities

(Crocodile eats the bigger meal)

$\leq$ bigger meal
Bigger meal $\geq$

Inequalities Equations

$$3x \geq x+7$$

Change to an equal sign, work it out as normal then put the inequality sign back in

Foundation Key Facts Sheet

To calculate compound interest, find the multiplier:

Amount after n years = original amount $\times$ multiplier ^{n}

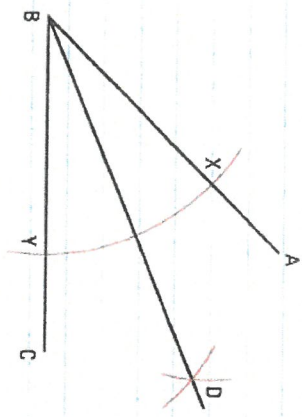
$y \propto \frac{1}{x}$ is the statement of proportionality.

$y = k \times \frac{1}{x}$ or $y = \frac{k}{x}$ are ways of writing the formula, where k is the constant of inverse proportionality

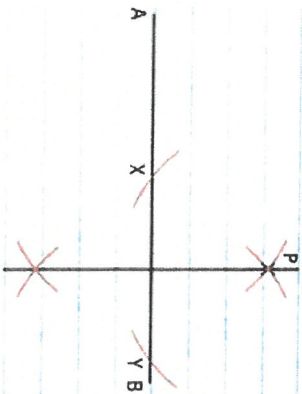
$y \propto x$ is the **statement of proportionality**.

$y = kx$ is the formula, where k is the constant of proportion

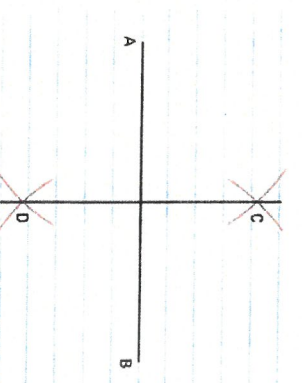
Construction – Angle Bisector



Construction – Perpendicular line from a point



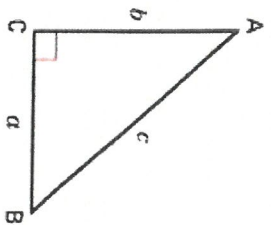
Construction - Perpendicular Bisector

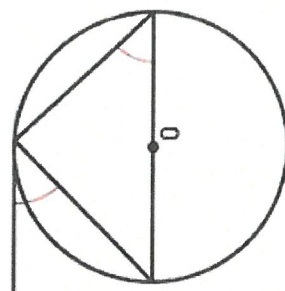
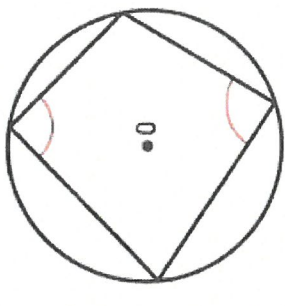
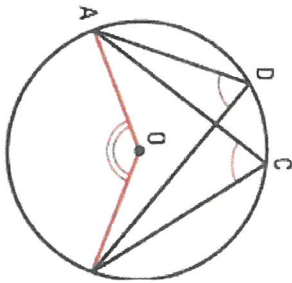
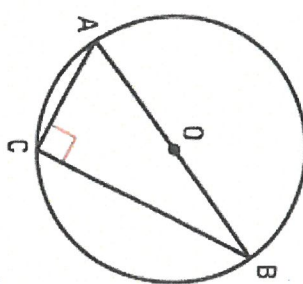
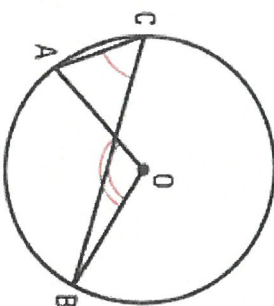
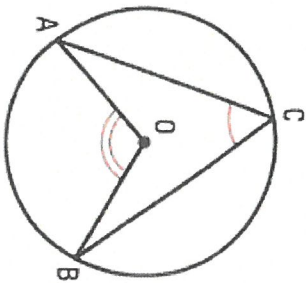


Pythagoras Theorem

$$c^2 = a^2 + b^2$$

Remember to square root the answer!



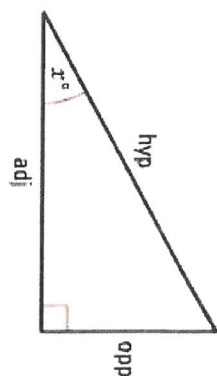


SOHCAHTOA might help you remember these results.
 Sin Opp Hyp Cos Adj Hyp Tan Opp Adj

$$\sin x^\circ = \frac{\text{opp}}{\text{hyp}}$$

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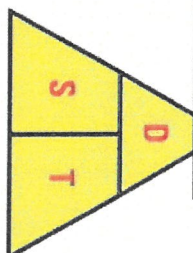


'Drink Some Tea'

$$D = S \times T$$

$$S = \frac{D}{T}$$

$$T = \frac{D}{S}$$



$$8 \text{ km} = 5 \text{ miles}$$

$$1 \text{ km} = 5/8 \text{ miles}$$

FREQUENCY DENSITY

Time taken (t seconds)	Frequency	Class width	Frequency density = frequency / class width
$10 < t \leq 30$	5	20	$\frac{5}{20} = 0.25$
$30 < t \leq 35$	4	5	$\frac{4}{5} = 0.8$
$35 < t \leq 40$	8	5	$\frac{8}{5} = 1.6$
$40 < t \leq 50$	27	10	$\frac{27}{10} = 2.7$
$50 < t \leq 70$	24	20	$\frac{24}{20} = 1.2$

Plot the Class width and the FD as bars!

See a table in the exam?, its either...

1. Mean from a table
2. Cumulative frequency
3. Histogram

CUMULATIVE FREQUENCY

Time (t minutes)	Frequency	Cumulative frequency
$t \leq 60$	0	0
$60 < t \leq 65$	2	$0 + 2 = 2$
$65 < t \leq 70$	12	$2 + 12 = 14$
$70 < t \leq 75$	21	$14 + 21 = 35$
$75 < t \leq 80$	5	$35 + 5 = 40$

Plot the points in brackets, should be a stretched 'S' shape.

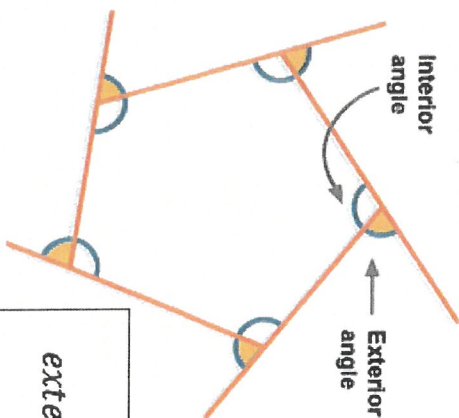
MEAN FROM A TABLE

Number of calls	Frequency	Class midpoint (x)	$f \times x$
3-5	2	4	8
6-8	3	7	21
9-11	5	10	50
12-14	7	13	91
15-17	4	16	64
Totals	21		234

No plotting needed!

$$\text{Expectation} = n \times p \text{ (number in sample } \times \text{ probability)}$$

$$\text{exterior angle} = \frac{360}{n}$$



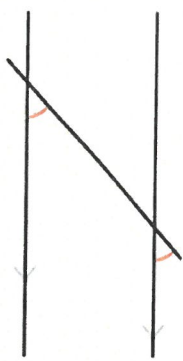
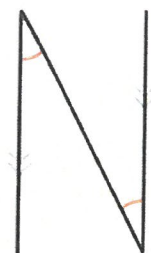
$$a^0 = 1$$

Alternate Angles

$$a^{-n} = \frac{1}{a^n}$$

$$a^{\frac{1}{n}} = \sqrt[n]{a}$$

Corresponding Angles



$$(x+7)(x-2)$$

'See a bracket, multiply it out'

'Don't see a bracket, put it in'

$$C = \pi \times d$$

'Cherry Pies Delicious, Apple Pies R 2'

$$A = \pi r^2$$

$$a^m \times a^n = a^{m+n}$$

$$a^m \div a^n = a^{m-n}$$

$$(a^m)^n = a^m \times n$$

Equations - 'chuck rubbish over the fence!'

Inequalities

(Crocodile eats the bigger meal)
 $\leq$ bigger meal
 $\geq$ bigger meal

Inequalities Equations

$$3x \geq x+7$$

Change to an equal sign, work it out as normal then put the inequality sign back in

Higher Maths Key Facts Sheet

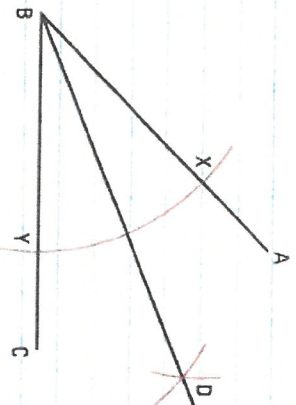
To calculate compound interest, find the multiplier:

Amount after n years = original amount $\times$ multiplier ^{n}

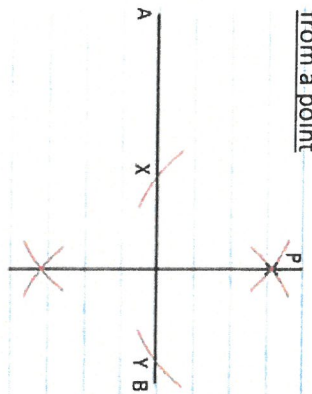
$y \propto \frac{1}{x}$ is the statement of proportionality.

$y = k \times \frac{1}{x}$ or $y = \frac{k}{x}$ are ways of writing the formula, where k is the constant of inverse proportionality

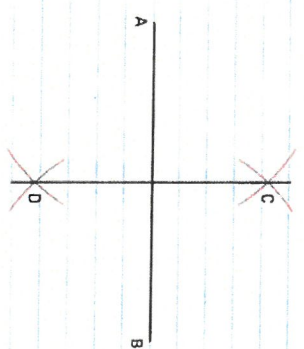
Construction - Angle Bisector



Construction - Perpendicular line from a point



Construction - Perpendicular Bisector



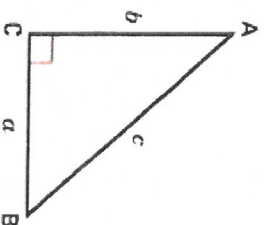
$y \propto x$ is the statement of proportionality.

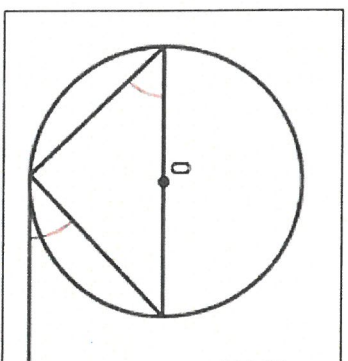
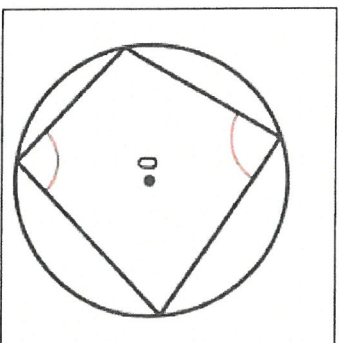
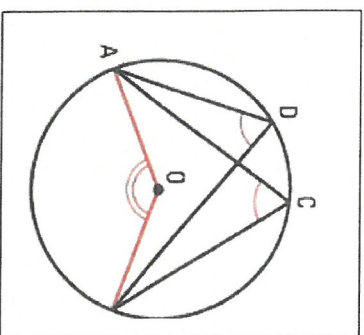
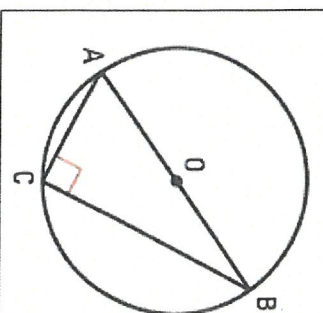
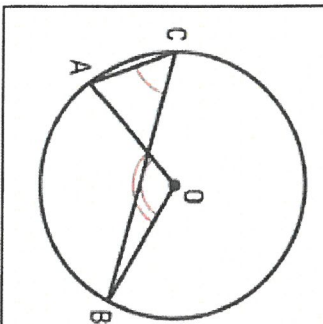
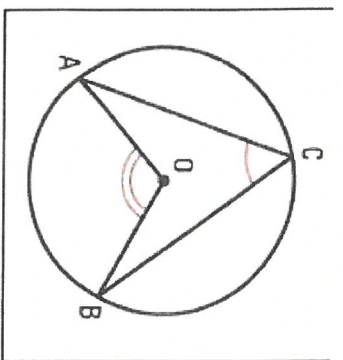
$y = kx$ is the formula, where k is the constant of proportionality

Pythagoras Theorem

$$c^2 = a^2 + b^2$$

Remember to square root the answer!



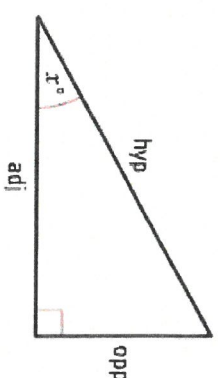


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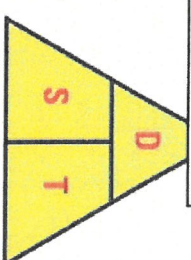
LEARN!

KM to Miles

8k m = 5 miles

1km = 5/8 miles

'Drink Some Tea'



$$D = S \times T$$

$$S = \frac{D}{T}$$

$$T = \frac{D}{S}$$

$$\text{frequency density} = \frac{\text{frequency}}{\text{class width}}$$

$$\text{Estimated mean} = \frac{\sum f \times x}{\sum f}$$

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See a table in the exam?, its either...

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3. Histogram

Interior angle

Exterior angle

$$\text{exterior angle} = \frac{360}{n}$$

Expectation = n x p (number in sample x probability)

Remember Completing the square!

Expressions like $ax^2 + bx + c$ are rewritten as $a(x^2 + \frac{b}{a}x)$

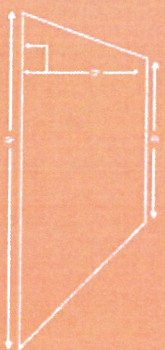
Probability

Where $P(A)$ is the probability of outcome A, and $P(B)$ is the probability of outcome B:

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

$$P(A \text{ and } B) = P(A \text{ given } B) P(B)$$

Perimeter, area, surface area and volume formulae

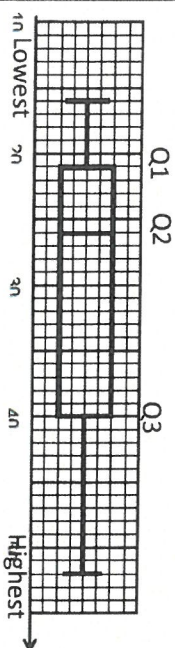


Where a and b are the lengths of the parallel sides and h is their perpendicular separation:

$$\text{Area of a trapezium} = \frac{1}{2}(a + b)h$$

Volume of a prism = area of cross section $\times$ length

Box Plots



Learn the quadratic formula!

You can use the formula $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ to solve quadratic equations.

RATIO – Add the ratio, divide the total to find ONE PART.

Order of the ratio is how you write it!

Non RIGHT angle
Trigonometry

Sine Rule – Pairs of information

[pair – pair – apple – eve – sin – Sine Rule]

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Cosine Rule – No pairs of information

Finding an angle

Finding a side

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

Area of a triangle formula:

$$\frac{1}{2}ab \sin C$$

Vectors – Move from a to b along lines/sides you know!

1. Magnitude
2. Direction

Science

- PAPER 1 GCSE SCIENCE REVISION
- The topics are
- Biology
- Cell biology
- Organisation
- Infection and response
- Bioenergetics
- Physics
- Particles
- Energy
- Electricity
- Atomic structure (radioactivity/radiation)
- Chemistry
- Atomic Structure and the Periodic Table
- Bonding
- Quantitative chemistry
-
- Chemical and energy changes
-
- Revision website suggestions
- <https://www.aqa.org.uk/subjects/science>
- <https://www.bbc.co.uk/bitesize/examspecs/z8r997h>
- You tube – required practicals-
- https://www.youtube.com/c/MalmesburyEducation/playlists?view=50&sort=dd&shelf_id=1



Key Science Examination Command Words – you do what they tell you to!

- **Calculate**
- Students should use numbers given in the question to work out the answer.
- **Choose**
- Select from a range of alternatives.
- **Compare**
- This requires the student to describe the similarities and/or differences between things, not just write about one.
- **Complete**
- Answers should be written in the space provided, for example on a diagram, in spaces in a sentence, or in a table.
- **Define**
- Specify the meaning of something.
- **Describe**
- Students may be asked to recall some facts, events or process in an accurate way.
- **Design**
- Set out how something will be done.
- **Determine**
- Use given data or information to obtain an answer.
- **Draw**
- To produce, or add to, a diagram. Estimate. Assign an approximate value.
- **Evaluate**
- Students should use the information supplied, as well as their knowledge and understanding, to consider evidence for and against.
- **Explain**
- Students should make something clear, or state the reasons for something happening.
- **Give**
- Only a short answer is required, not an explanation or a description.
- **Identify**
- Name or otherwise characterise.
- **Justify**
- Use evidence from the information supplied to support an answer.
- **Label**
- Provide appropriate names on a diagram.
- **Measure**
- Find an item of data for a given quantity.
- **Name**
- Only a short answer is required, not an explanation or a description. Often it can be answered with a single word, phrase or sentence.
- **Plan**
- Write a method.
- **Plot**
- Mark on a graph using data given.
- **Predict**



- Give a plausible outcome.
- **Show**
- Provide structured evidence to reach a conclusion.
- **Sketch**
- Draw approximately.
- **Suggest**
- This term is used in questions where students need to apply their knowledge and understanding to a new situation.
- **Use**
- The answer must be based on the information given in the question. Unless the information given in the question is used, no marks can be given. In some cases students might be asked to use their own knowledge and understanding.
- **Write**

Only a short answer is required, not an explanation or a description

Maths

What might you be asked to calculate or do?

Arithmetic and numerical computation

Recognise and use expressions in decimal form

Recognise and use expressions in standard form

Use ratios, fractions and percentages

Make estimates of the results of simple calculations

Handling data

Use an appropriate number of significant figures

Find arithmetic means

Construct and interpret frequency tables and diagrams, bar charts and histograms

Understand the principles of sampling as applied to scientific data (biology questions only)

Understand simple probability (biology questions only)

Understand the terms mean, mode and median

Use a scatter diagram to identify a correlation between two variables (biology and physics questions only)

Make order of magnitude calculations

Algebra

Understand and use the symbols: =, <, <<, >>, >, $\propto$, ~

Change the subject of an equation

Substitute numerical values into algebraic equations using appropriate units for physical quantities (chemistry and physics questions only)

Solve simple algebraic equations (biology and physics questions only)

Graphs

Translate information between graphical and numeric form

Understand that $y = mx + c$ represents a linear relationship

Plot two variables from experimental or other data

Determine the slope and intercept of a linear graph

Draw and use the slope of a tangent to a curve as a measure of rate of change (chemistry and physics questions only)

Understand the physical significance of area between a curve and the x-axis and measure it by counting squares as appropriate (physics questions only)

Geometry and trigonometry

Use angular measures in degrees (physics questions only)

Visualise and represent 2D and 3D forms including two dimensional representations of 3D objects (chemistry and physics questions only)

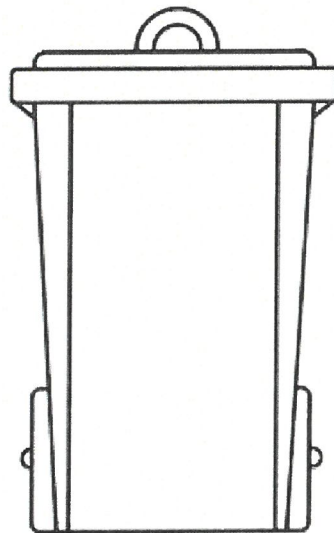
Calculate areas of triangles and rectangles, surface areas and volumes of cubes.

Revision Resources RE

I have created a range of revision resources in this pack to help you revise, some may work for you, so may not.

- Brain Dump
- Crib sheet
- Revision Clock

Brain Dump Revision - Pick a topic, dump (write) everything you know about it in the bin. Then use your notes or textbook to add the missing bits around the bin



Focus:
Topic:

Summary of main points

List Key words

1st Denominational view

2nd Denominational view

2 Key quotes

How does this relate to the 21st Cent?

