11 Edexcel GCSE
Mathematics (Linear) – 1MA0
MULTIPLICATION AND DIVISION

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

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Advice

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1. Work out 362 × 54
You **must** show all your working.

.....

(Total 3 marks)

2. Work out 736 × 24

You **must** show all your working.

.....

(Total 3 marks)

3. Richard paid 56p for 7 pencils.
The cost of each pencil was the same.
Work out the cost of 4 of these pencils.

..... p

(Total 2 marks)

4. 487 is divided by 23

What is the remainder?

You **must** show all your working.

.....

(Total 2 marks)

5. Work out 1572 ÷ 0.3

You **must** show all your working.

.....

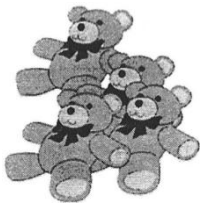
(Total 2 marks)

6. Work out 286 × 43

……..

(Total 3 marks)

7. Fatima bought 48 teddy bears at £9.55 each.



(a) Work out the total amount she paid.

£ .....

(3)

Fatima sold all the teddy bears for a total of £696.

She sold each teddy bear for the same price.

(b) Work out the price at which Fatima sold each teddy bear.

£ .....

(3)

(Total 6 marks)

8. Nick takes 26 boxes out of his van.
The weight of each box is 32.9 kg.

(a) Work out the **total** weight of the 26 boxes.

..... kg

(3)

Then Nick fills the van with large wooden crates.
The weight of each crate is 69 kg.
The greatest weight the van can hold is 990 kg.

(b) Work out the greatest number of crates that the van can hold.

.....

(4)

(Total 7 marks)

9. The cost of a calculator is £6.79
Work out the cost of 28 of these calculators.

£.....

(Total 3 marks)

10. Work out 3.15×24

.....

(Total 3 marks)

11. ‘Jet Tours’ has an aeroplane that will carry 27 passengers.

Each of the 27 passengers pays £55 to fly from Liverpool to Prague.

Work out the total amount that the passengers pay.

£ …….

(Total 2 marks)

12.

Canal boat for hire £1785.00 for 14 days

What is the cost **per day** of hiring the canal boat?

£ .....

(Total 3 marks)

12 Edexcel GCSE
Mathematics (Linear) – 1MA0

TIME TABLES & DISTANCE TABLES

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

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Advice

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Check your answers if you have time at the end.

1. Here is part of a railway timetable.

Manchester	07 53	09 17	10 35	11 17	13 30	14 36	16 26
Stockport	08 01	09 26	10 43	11 25	13 38	14 46	16 39
Macclesfield	08 23	09 38	10 58	11 38	13 52	14 58	17 03
Congleton	08 31	–	–	11 49	–	15 07	17 10
Kidsgrove	08 37	–	–	–	–	–	17 16
Stoke-on-Trent	08 49	10 00	11 23	12 03	14 12	15 19	17 33

A train leaves Manchester at 10 35.

(a) At what time should this train arrive in Stoke-on-Trent?

.....

(1)

Doris has to go to a meeting in Stoke-on-Trent.
She will catch the train in Stockport.
She needs to arrive in Stoke-on-Trent before 2 pm for her meeting.

(b) Write down the time of the latest train she can catch in Stockport.

.....

(1)

(c) Work out how many minutes it should take the 14 36 train from Manchester to get to Stoke-on-Trent.

..... minutes

(1)

The 14 36 train from Manchester to Stoke-on-Trent takes less time than the 16 26 train from Manchester to Stoke-on-Trent.

(d) How many minutes less?

..... minutes

(2)

(5 marks)

2. Here is part of a train timetable for six trains from Birmingham to London.

Train	**A**	**B**	**C**	**D**	**E**	**F**
Birmingham	06 35	07 00	07 15	07 30	07 45	08 00
London	08 09	08 39	08 48	09 04	09 59	09 39

(a) Which train takes more than 2 hours to go from Birmingham to London?

.....

(1)

(b) Work out the number of **minutes** taken by train **D** to go from Birmingham to London.

..... minutes

(2)

Paula has to go to a meeting in London.
She will catch one of the six trains from Birmingham.
She needs to arrive in London before 09 00

(c) Write down the latest train that she can catch.

.....

(1)

(4 marks)

3. The table shows part of a bus timetable from Shotton to Alton.

Shotton	07 30	08 00	09 00	10 00	11 00
Crook	07 45	08 15	09 15	10 15	11 15
Prudhoe	07 58	08 28	09 28	10 28	11 28
Hexham	08 15	08 45	09 45	10 45	11 45
Alton	08 30	09 00	10 00	11 00	12 00

A bus leaves Shotton at 07 30

(a) What time should it arrive at Alton?

.....

(1)

Another bus leaves Prudhoe at 08 28

(b) How many minutes should it take to get to Hexham?

..... minutes

(1)

Serena lives in Crook.

She has to be in Hexham by quarter past 11

(c) What is the time of the latest bus she can catch from Crook to arrive in Hexham by quarter past 11?

.....

(1)

(3 marks)

4. Here is part of a timetable for a bus.

Blunsdon	07 18	07 45	08 33
Cricklade	07 26	07 53	08 41
Latton	07 31	07 58	08 46
South Cerney	07 38	08 05	08 53
Siddington	07 47	08 14	09 02
Seven Springs	08 26	08 51	09 39
Cheltenham	08 50	09 12	10 00

A bus leaves Blunsdon at 07 45

(a) At what time should the bus arrive at Siddington?

.....

(1)

Peter arrives at the Latton bus stop at 08 35
He waits for the next bus to Seven Springs.

(b) (i) How many minutes should he wait?

..... minutes

(ii) At what time should Peter arrive at Seven Springs?

.....

(2)

Marie gets the bus from Cricklade at 07 26

(c) How many minutes should this bus take to travel from Cricklade to Cheltenham?

..... minutes

(2)

(5 marks)

5. The table shows part of a train timetable from Weymouth to London Waterloo.

Weymouth	0903	0920	1003	1020	1103
Poole	0940	1007	1040	1107	1140
Bournemouth	0953	1017	1054	1117	1154
Southampton	1026	1058	1128	1158	1228
Woking	1119		1219		1319
London Waterloo	1149	1220	1249	1320	1349

A train leaves Weymouth at 09 03

(a) At what time should it arrive at London Waterloo?

.....

(1)

Another train leaves Poole at 11 40

(b) How many minutes should it take to travel to Bournemouth?

..... minutes

(1)

Sally lives in Weymouth.
She has a meeting in Southampton at 12 00
When Sally arrives at Southampton she takes 25 minutes to travel to her meeting.

(c) What is the time of the latest train she can take from Weymouth?

.....

(1)

(3 marks)

6. Here is part of a railway timetable.

Cambridge	08 25	08 45	08 54	09 26	09 50
Royston	08 46	08 59	09 15	09 43	10 04
Letchworth Garden City	09 00	09 09	09 29	09 54	10 14
Hitchin	09 04	09 33	09 58	-	-
Stevenage	09 10	-	09 39	10 03	-
Finsbury Park	09 41	-	10 09	10 21	-
London	09 50	09 42	10 18	10 30	10 46

A train leaves Cambridge at 09 26

(a) At what time should this train arrive in London?

(1)

.....

A different train leaves Cambridge at 09 50

(b) Work out how many minutes this train should take to get to London.

(1)

..... minutes

Susan lives in Royston.
She has to be in Stevenage by 10 a.m.

(c) What is the time of the latest train she can catch from Royston to arrive in Stevenage by 10 a.m.?

(1)

.....

(3 marks)

7. Here is part of a train timetable from Birmingham to Leicester.

Birmingham	06 23	06 53	07 23	07 53
Coleshill	06 35	07 05	07 35	08 05
Nuneaton	07 00	07 22	07 51	08 22
Hinckley	00 00	07 29	07 58	08 29
Leicester	07 17	07 48	08 17	08 48

A train leaves Birmingham at 06 53

(a) (i) What time should this train get to Hinckley?

.....

(ii) How many minutes should this train take to get to Hinckley?

..... minutes

(2)

Silvia wants to catch a train in Nuneaton.
She needs to get to Leicester **before** 08 30

(b) Write down the time of the latest train Silvia can catch from Nuneaton.

.....

(1)

A train will leave Leicester at 07 27 for Stansted Airport.
The train should take 2 hours 28 minutes to go from Leicester to Stansted Airport.

(c) What time should the train get to Stansted Airport?

.....

(1)

(4 marks)

8. Here is part of a train timetable from Crewe to London.

Station	Time of Leaving
Crewe	08 00
Wolverhampton	08 40
Birmingham	09 00
Coventry	09 30
Rugby	09 40
Milton Keynes	10 10

(a) At what time should the train leave Coventry?

.....

(1)

The train should arrive in London at 10 45

(b) How long should the train take to travel from Crewe to London?

.....

(2)

Verity arrived at Milton Keynes station at 09 53

(c) How many minutes should she have to wait before the 10 10 train leaves?

..... minutes

(1)

Lisa uses her railcard to buy a ticket.
She gets $\frac{1}{3}$ off the normal price of the ticket.
The normal price of the ticket is £24.90

Young Person's RAILCARD
$\frac{1}{3}$ off normal price

(d) Work out how much Lisa pays for the ticket.

£ .....

(3)

(7 marks)

9. The table shows the distances in kilometres between some cities in the USA.

Boston					
1589	Chicago				
4891	3366	Los Angeles			
2474	2184	4373	Miami		
342	1352	4539	2133	New York	
5067	3493	667	4990	4826	San Francisco

(a) Write down the distance between Los Angeles and New York.

……km

(1)

One of the cities in the table is 2184 km from Miami.

(b) Write down the name of this city.

…….

(1)

(c) Write down the name of the city which is furthest from San Francisco.

…….

(1)

(3 marks)

---

10. The table shows the distances in kilometres between 5 cities.

Hull				
100	Leeds			
162	73	Manchester		
110	60	65	Sheffield	
63	40	118	95	York

(a) Write down the distance between Hull and Manchester.

..... km

(1)

(b) From the table, write down the name of the city which is

(i) nearest to Hull, ...

(ii) 60 km from Sheffield. .....

(2)

(3 marks)

11.

Reading				
22	**Slough**			
28	40	**Guildford**		
30	22	47	**Oxford**	
45	28	66	25	**Buckingham**

The table gives distances in miles by road between some towns.

(a) Write down the distance between Reading and Guildford.

..... miles
(1)

Sophie drives from Slough to Guildford.
She then drives from Guildford to Reading.
Sophie then drives from Reading to Slough.

(b) Work out the total distance that she drives.

..... miles
(2)
(3 marks)

---

12. The diagram shows the distances, in miles, between some service areas on the M1 motorway.

For example, the distance between Toddington and Watford Gap is 70 miles.

Complete the table.

Toddington				
26	Scratchwood			
70		Watford Gap		
	83	39	Woodall	
	111		28	Trowell

(3 marks)

---

13. The table shows the distances, in miles, between 4 cities.

			London
74			Portsmouth
39	58		Reading
97	41	57	Salisbury

(a) Write down the distance between London and Salisbury.

..... miles
(1)

(b) Which two cities are the shortest distance apart?

..... and .....
(1)

Nassim drives from Portsmouth to Salisbury.
He then drives from Salisbury to Reading.
Finally he drives from Reading to Portsmouth.

(c) Work out the total distance Nassim drives.

..... miles
(3)

(5 marks)

13 Edexcel GCSE
Mathematics (Linear) – 1MA0
TALLYS AND CHARTS

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

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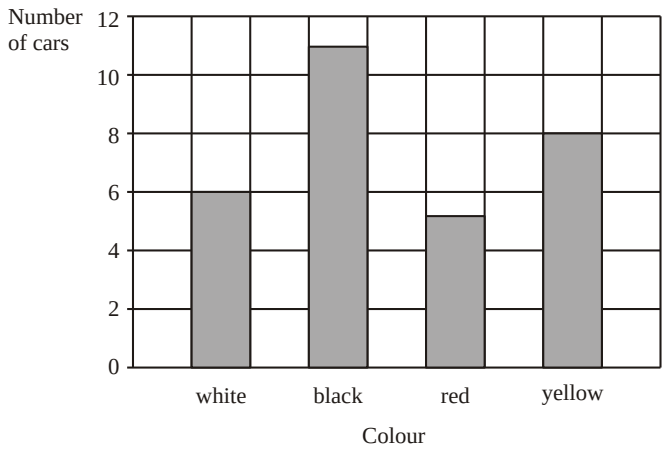
1. Jerry recorded the colour of each of the cars he saw one morning.

The bar chart shows this information.



(a) Write down the number of red cars.

.....

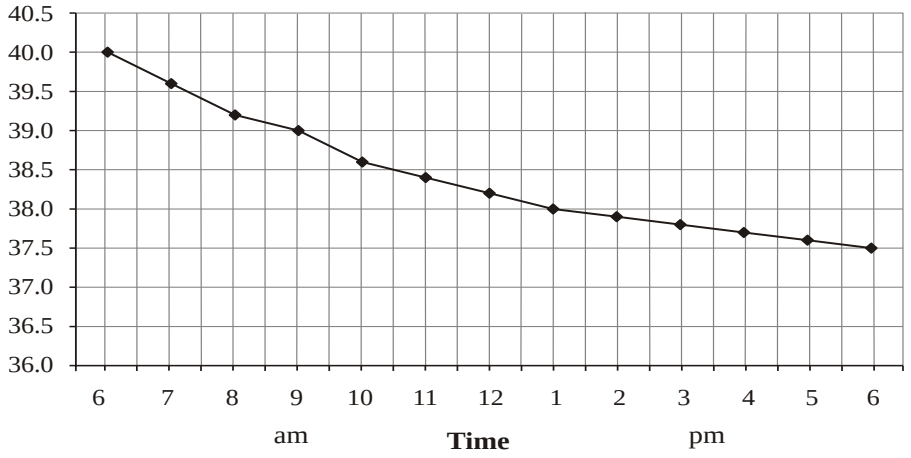
(1)

(b) Which was the most popular colour of car?

.....

(1)
(Total 2 marks)

2. José is in hospital.
Here is his temperature chart during one day.



(a) At what time was José's temperature 39.0°C?

.....

(1)

(b) What can you say about José's temperature from 6 am to 6 pm?

.....

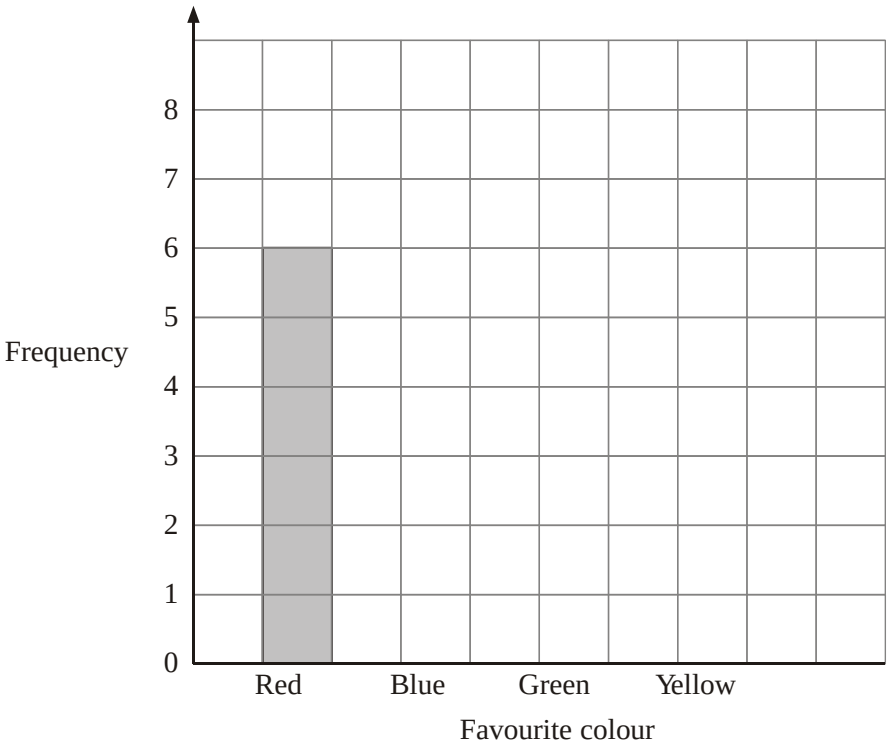
(1)
(Total 2 marks)

3. Steve asked his friends to tell him their favourite colour.

Here are his results.

Favourite colour	Tally	Frequency
Red	𝍸	6
Blue	𝍸 |||	8
Green	𝍸	5
Yellow	|||	3

(a) Complete the bar chart to show his results.



(2)

(b) Which colour did most of his friends say?

.....

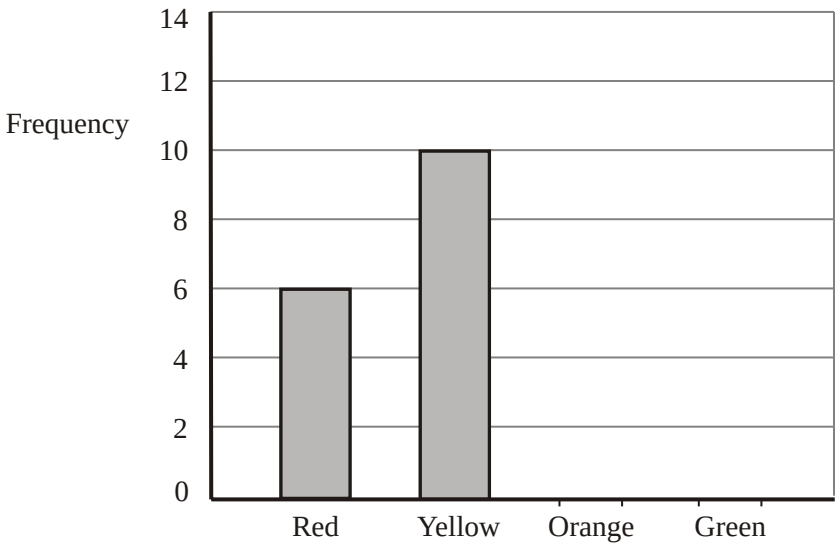
(1)

(Total 3 marks)

4. There are only red, yellow, orange and green sweets in a bag.

Peter recorded the colour of each sweet in the bag.

The bar chart shows some information about his results.



8 sweets were orange.
5 sweets were green.

(a) Complete the bar chart.

(2)

(b) Write down the number of red sweets.

.....

(1)

(c) What colour sweet is the mode?

.....

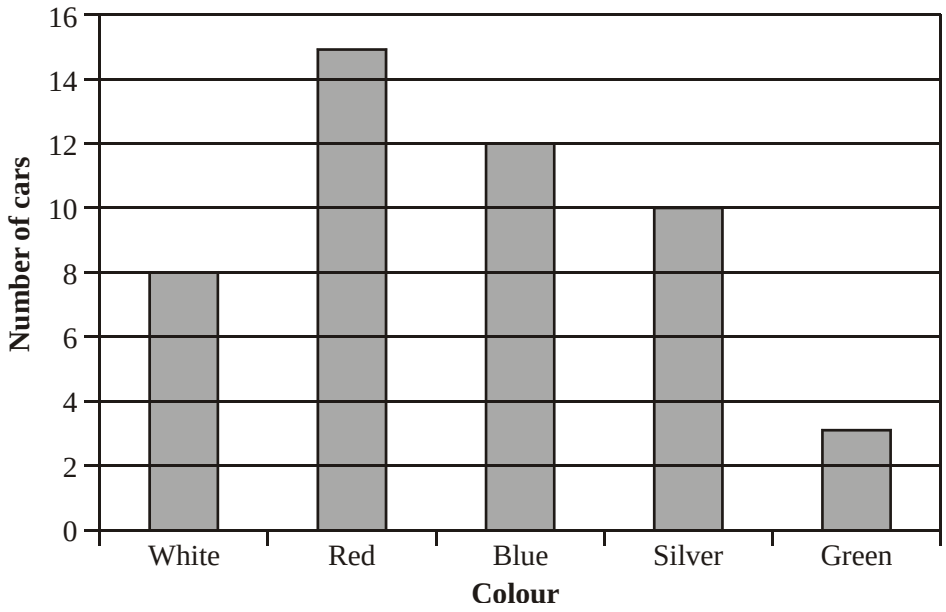
(1)

(d) Work out the total number of sweets in the bag.

.....

(1)
(Total 5 marks)

5. Lesley wrote down the colour of each car in the school car park.
The bar chart shows this information.



(a) Write down the number of blue cars.

.....

(1)

(b) What colour were most cars?

.....

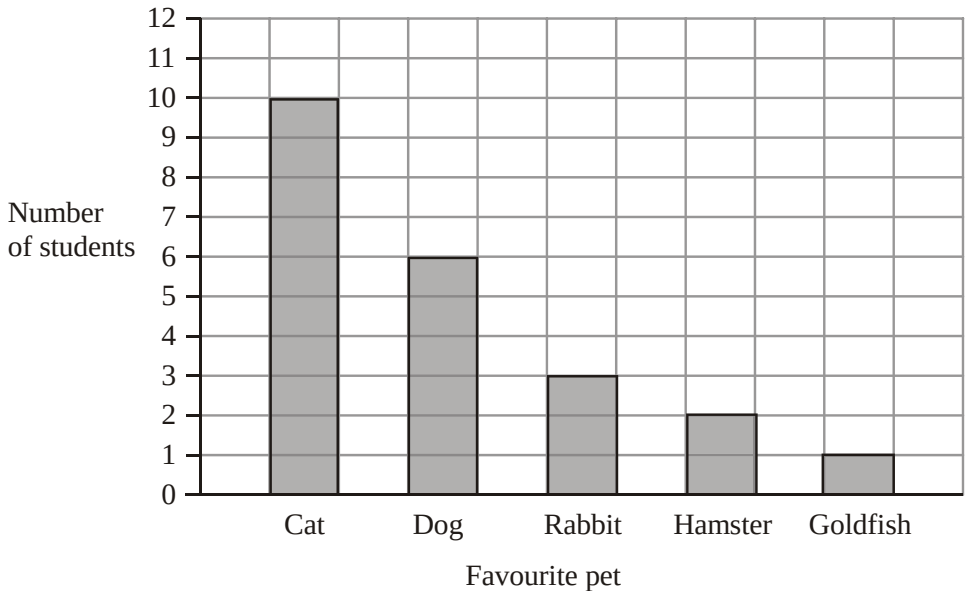
(1)

(c) Work out the total number of cars.

.....

(1)
(Total 3 marks)

6. Jessica asked some students to tell her their favourite pet.
She used the information to draw this bar chart.



(a) How many students said a rabbit?

.....

(1)

(b) Which pet did most students say?

.....

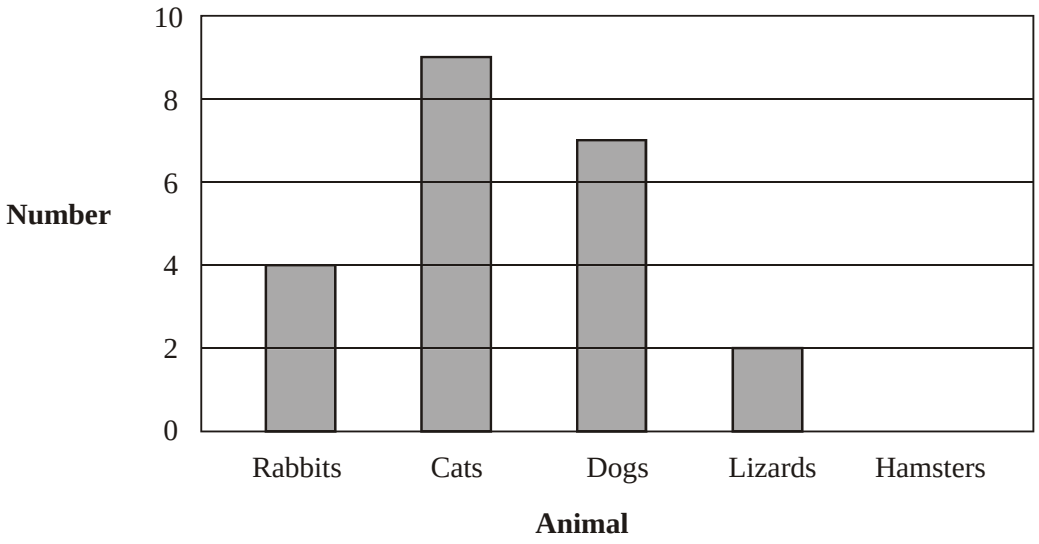
(1)

(c) Work out the number of students that Jessica asked.

.....

(1)
(Total 3 marks)

7. This bar chart gives information about the numbers of rabbits, cats, dogs and lizards taken to a vet on Monday.



(a) Write down the number of rabbits taken to the vet on Monday.

.....

(1)

(b) Write down the number of dogs taken to the vet on Monday.

.....

(1)

5 hamsters were also taken to the vet on Monday.

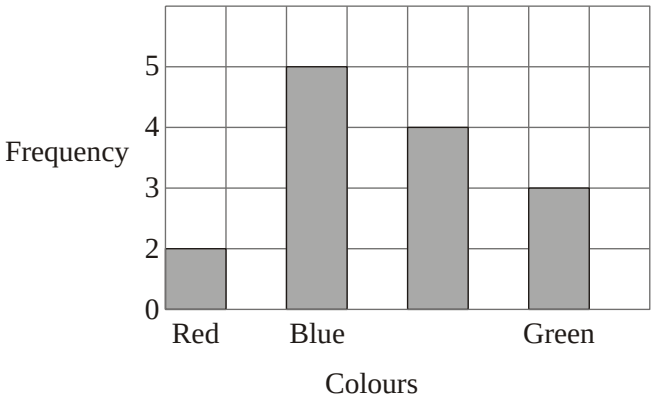
(c) Use this information to complete the bar chart.

(1)

(Total 3 marks)

8. Ray and Clare are pupils at different schools.
They each did an investigation into their teachers' favourite colours.

Here is Ray's bar chart of his teachers' favourite colours.



(a) Write down two things that are wrong with Ray's bar chart.

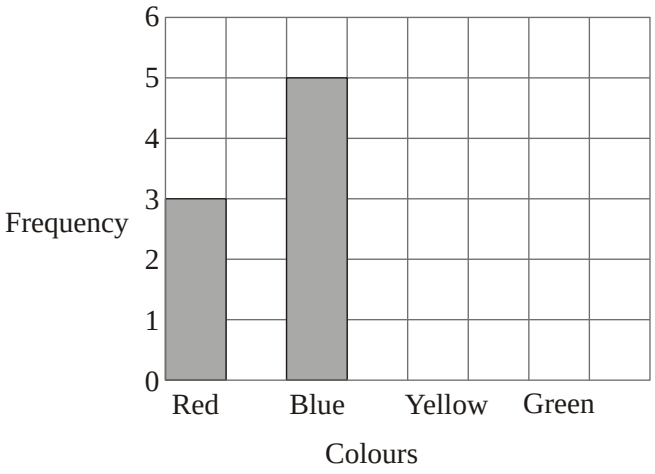
.....

.....

(2)

Clare drew a bar chart of her teachers' favourite colours.

Part of her bar chart is shown below.



4 teachers said that Yellow was their favourite colour.
2 teachers said that Green was their favourite colour.

(b) Complete Clare's bar chart.

(2)

(c) Which colour was the mode for the teachers that Clare asked?

.....

(1)

(d) Work out the number of teachers Clare asked.

.....

(1)

(e) Write down the fraction of the number of teachers that Clare asked who said Red was their favourite colour.

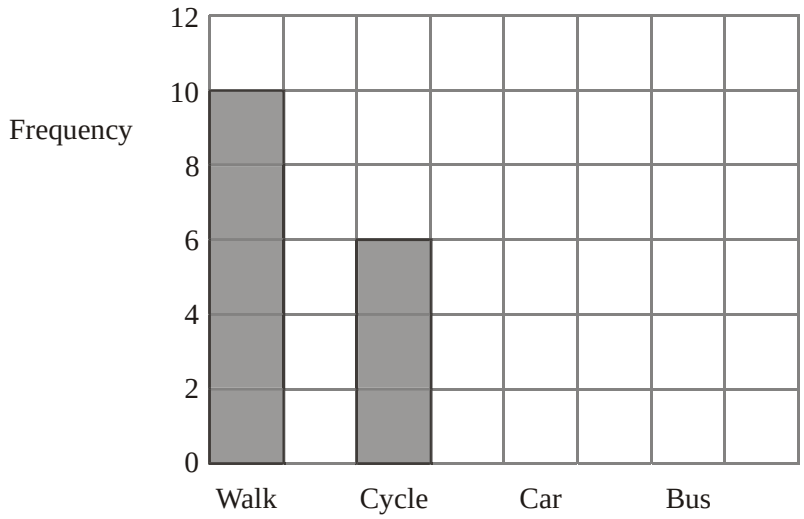
.....

(1)

(Total 7 marks)

9. Sophie asked the students in her class how they travelled to school.

The bar chart shows some information about the results, for everyone in Sophie's class.



4 students travel to school by car.
7 students travel to school by bus.

(a) Complete Sophie's bar chart.

(2)

(b) How many students in Sophie's class cycle to school?

.....

(1)

(c) Which method of travelling to school is used by the greatest number of students in Sophie's class?

.....

(1)

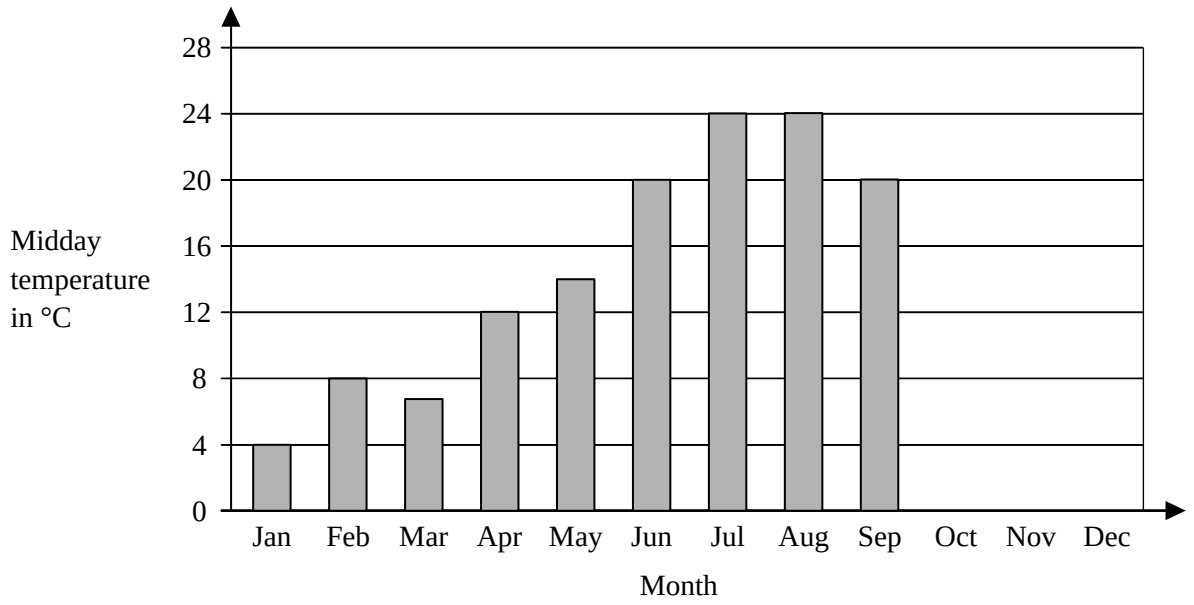
(d) Work out the total number of students Sophie asked.

.....

(1)

(Total 5 marks)

10. The bar chart shows some information about the midday temperature in Halifax on the first day of some months last year.



Here are the midday temperatures on the first day of October, November and December.

October	12°C
November	8°C
December	6°C

(a) Complete the bar chart to show this information.

(2)

(b) Which two bars show the highest temperatures?

..... and .....

(1)

(c) Work out the range of the temperatures shown on the bar chart.

..... °C

(1)

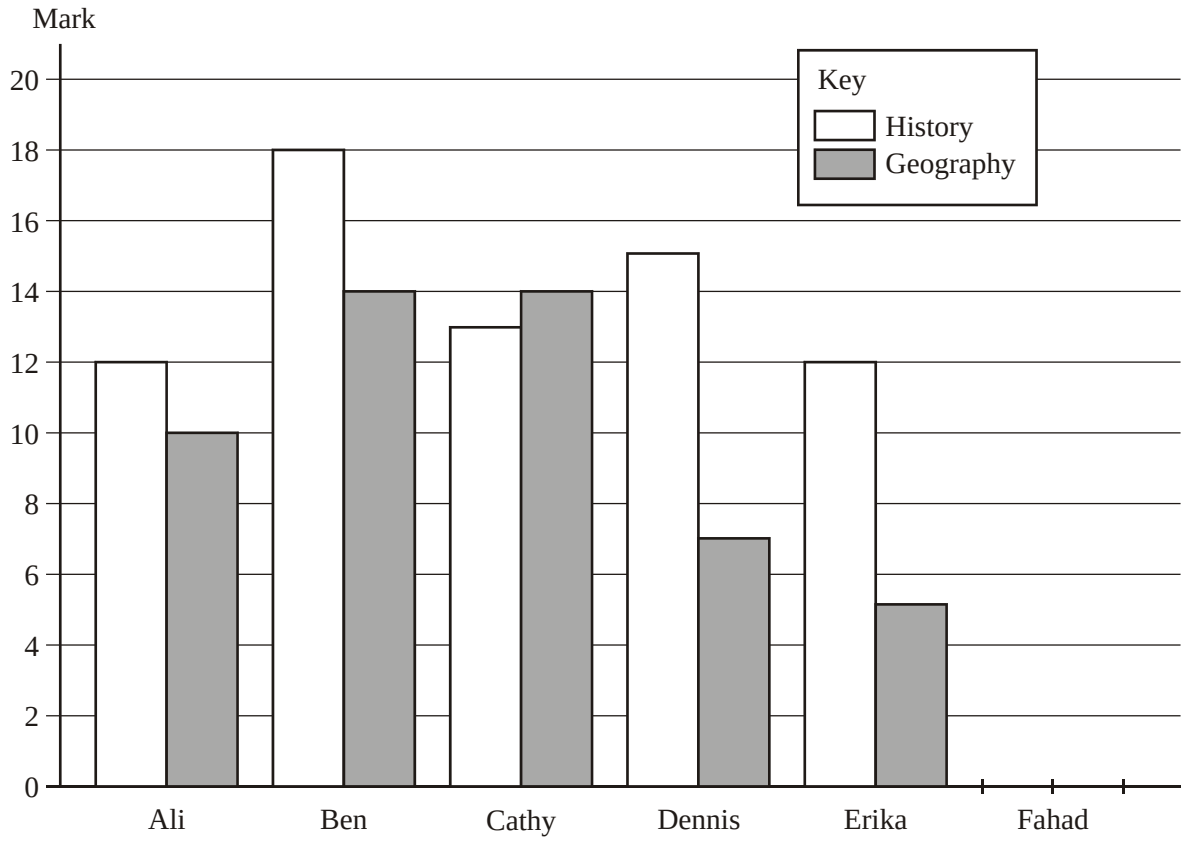
(d) Describe what happened to the temperatures on the bar chart between March and July.

.....

(1)

(Total 5 marks)

11. Six students each sat a history test and a geography test.
The marks of five of the students, in each of the tests, were used to draw the bar chart.



(a) How many marks did Ali get in his history test?

……

(1)

(b) How many marks did Dennis get in his geography test?

……

(1)

(c) One student got a lower mark in the history test than in the geography test.
Write down the name of this student.

……

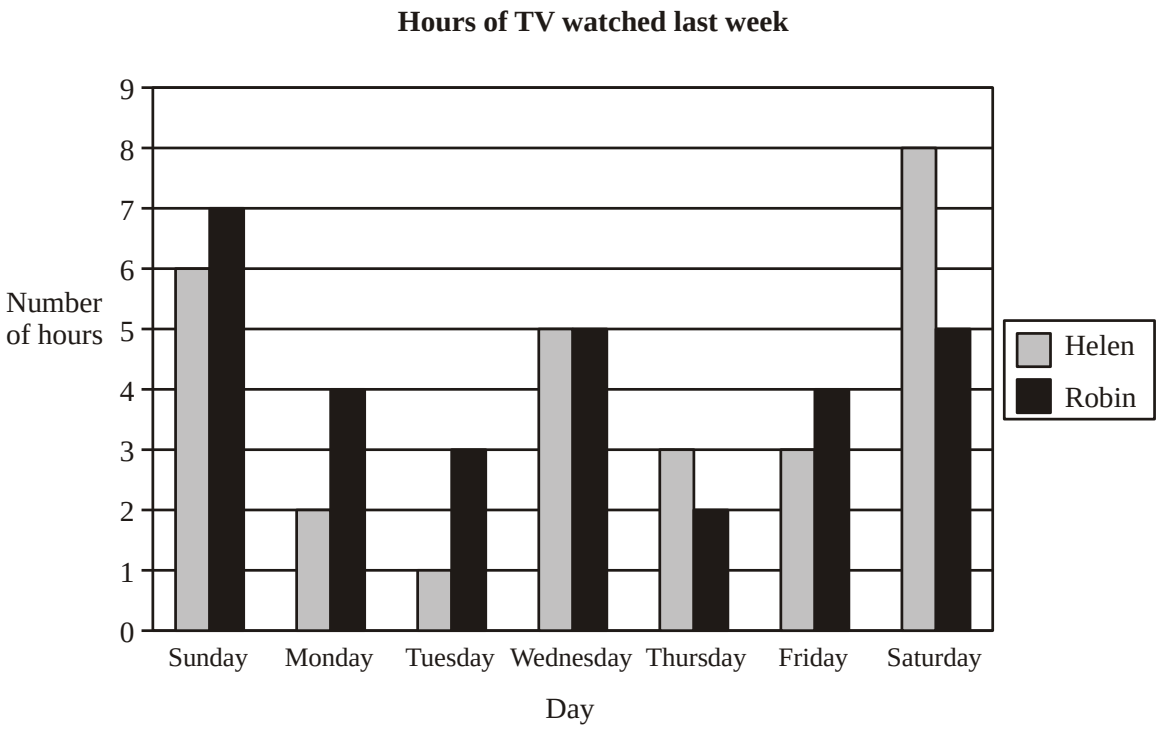
(1)

Fahad got 16 marks in the history test.
She got 11 marks in the geography test.

(d) Use this information to complete the bar chart.

(2)
(Total 5 marks)

12. Here is a bar chart showing the number of hours of TV that Helen and Robin watched last week.



(a) Write down the number of hours of TV that Helen watched on Monday.

……hours

(1)

(b) On which day did Helen and Robin watch the same number of hours of TV?

……

(1)

(c) (i) Work out the total number of hours of TV that Robin watched on Friday and Saturday.

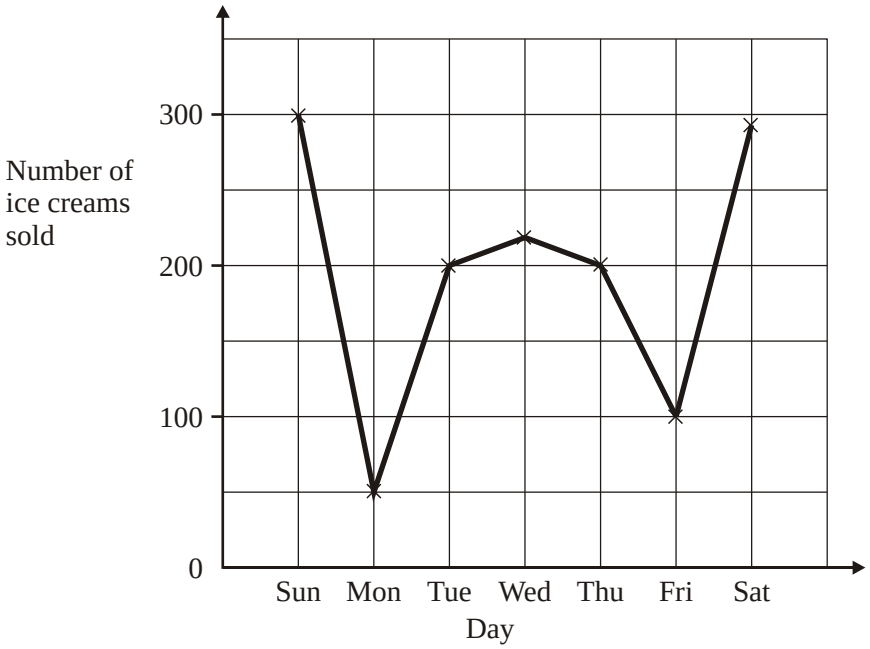
……hours

(ii) Who watched the greater number of hours of TV on Friday and Saturday? Show your working.

(3)

(Total 5 marks)

13. The graph shows the number of ice creams sold each day during one week



(a) How many more ice creams were sold on Tuesday than on Monday?

……ice creams

(1)

(b) Explain what might have happened on Monday.

.....

.....

(1)

(Total 2 marks)

14. Daniel carried out a survey of his friends' favourite flavour of crisps.

Here are his results.

Plain	Chicken	Bovril	Salt & Vinegar	Plain
Salt & Vinegar	Plain	Chicken	Plain	Bovril
Plain	Chicken	Bovril	Salt & Vinegar	Bovril
Bovril	Plain	Plain	Salt & Vinegar	Plain

(a) Complete the table to show Daniel's results.

Flavour of crisps	**Tally**	**Frequency**
Plain		
Chicken		
Bovril		
Salt & Vinegar		

(3)

(b) Write down the number of Daniel's friends whose favourite flavour was Salt & Vinegar.

……..

(1)

(c) Which was the favourite flavour of most of Daniel's friends?

……..

(1)

(Total 5 marks)

14 Edexcel GCSE
Mathematics (Linear) – 1MA0

COORDINATES

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

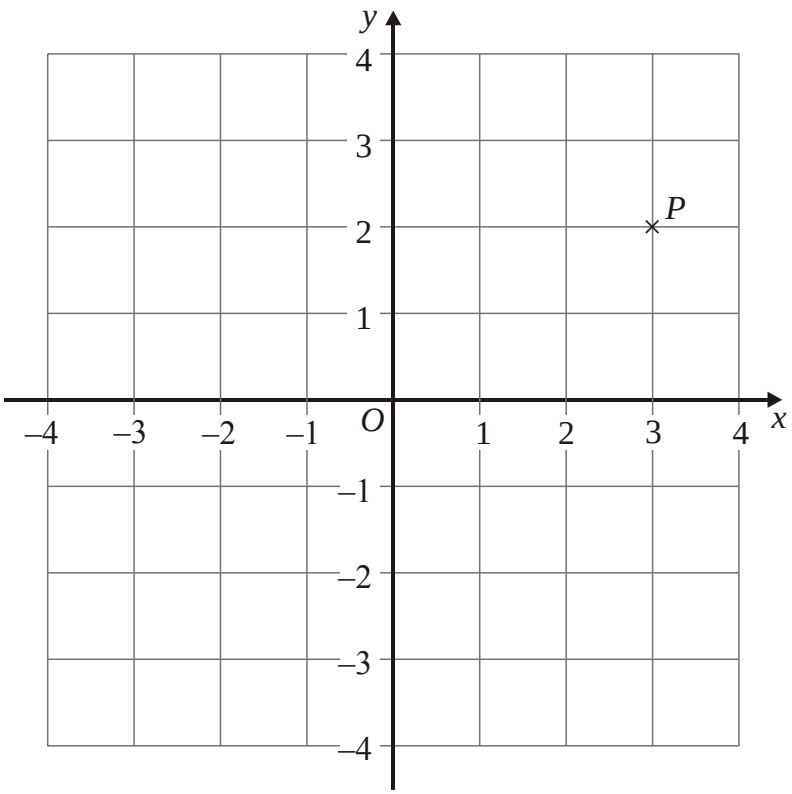
Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1.



(a) Write down the coordinates of the point *P*.

(..... , ...)

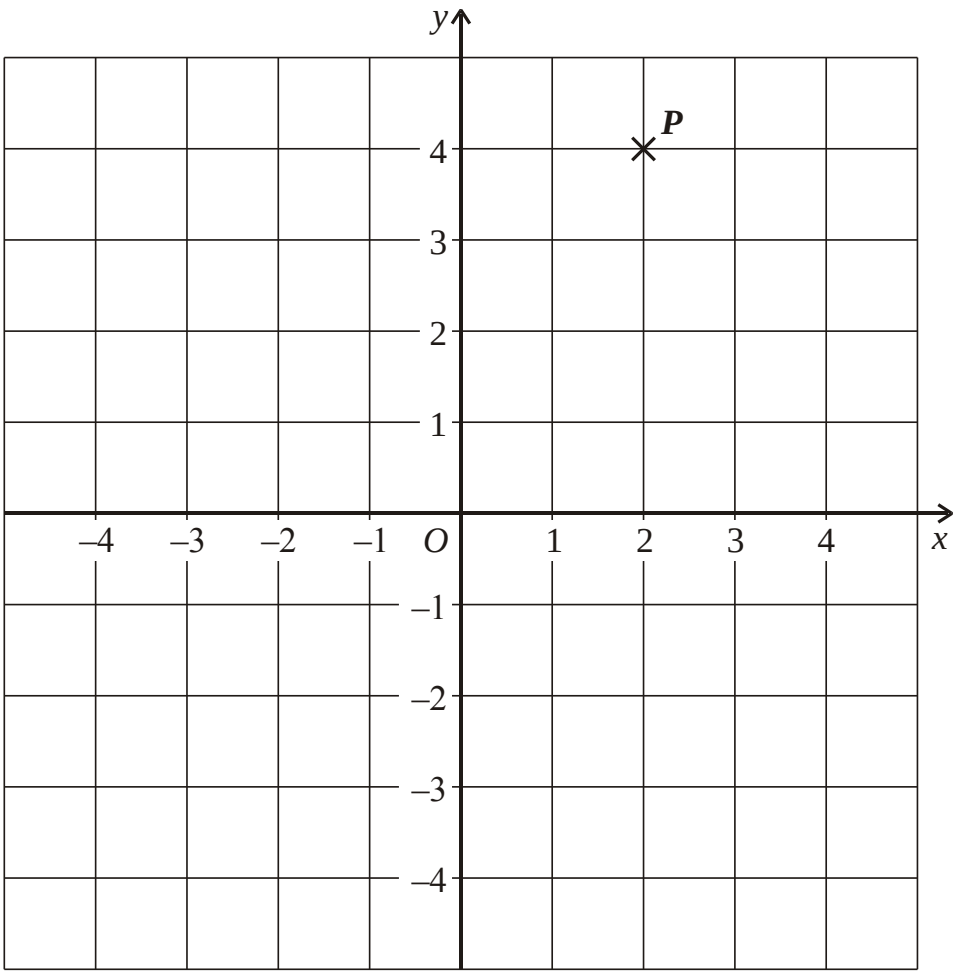
(1)

(b) (i) On the grid, plot the point (0, 3).
Label the point *Q*.

(ii) On the grid, plot the point (–2, –3).
Label the point *R*.

(2)
(Total 3 marks)

2.



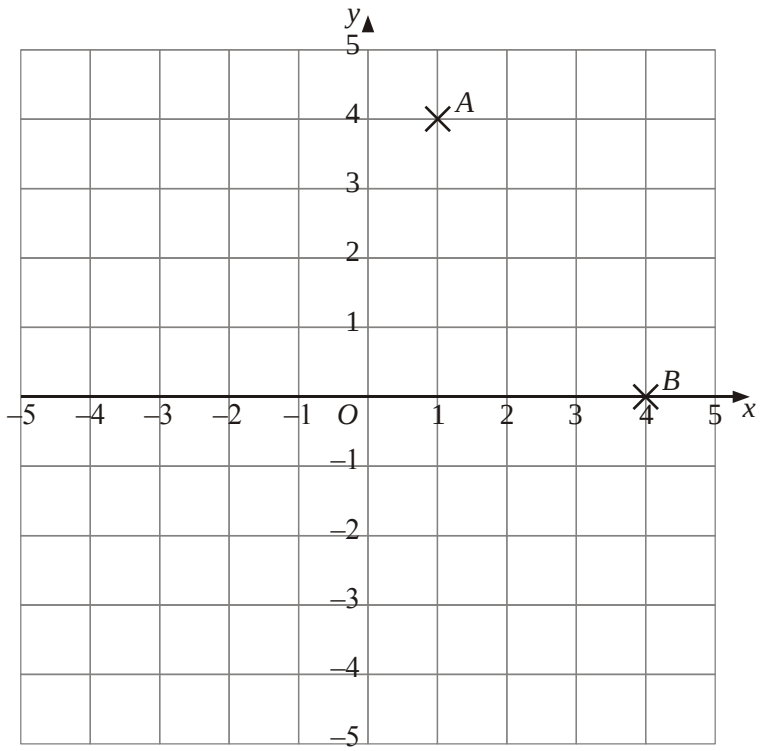
(i) Write down the coordinates of point *P*.

(..... , ...)

(ii) On the grid, plot the point (–3, –1).
Label this point with the letter *Q*.

(Total 2 marks)

3.



(a) (i) Write down the coordinates of the point *A*.

(..... , ...)

(ii) Write down the coordinates of the point *B*.

(..... , ...)

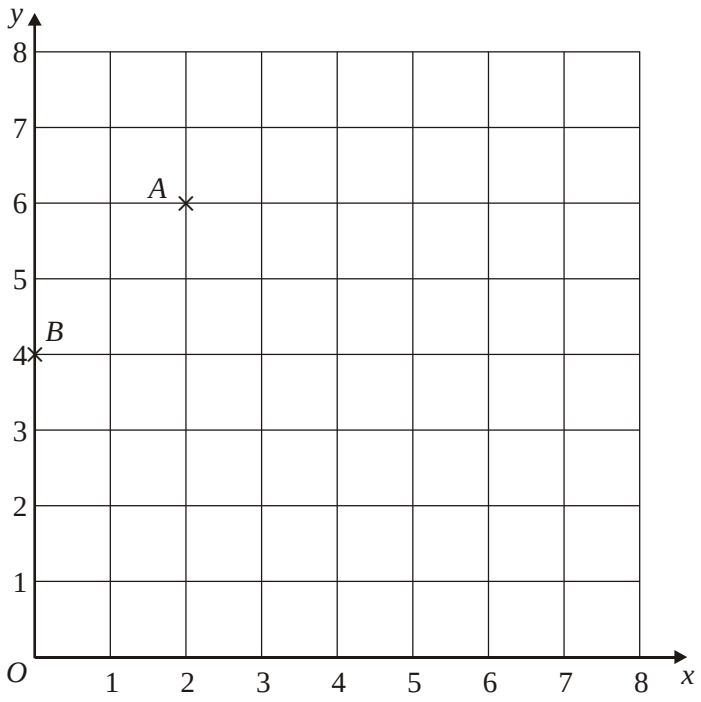
(2)

(b) (i) On the grid, plot the point (3, 2).
Label this point *P*.

(ii) On the grid, plot the point (–4, 3).
Label this point *Q*.

(2)
(Total 4 marks)

4.



(a) (i) Write down the coordinates of the point A.

(……,……)

(ii) Write down the coordinates of the point *B*.

(……,……)

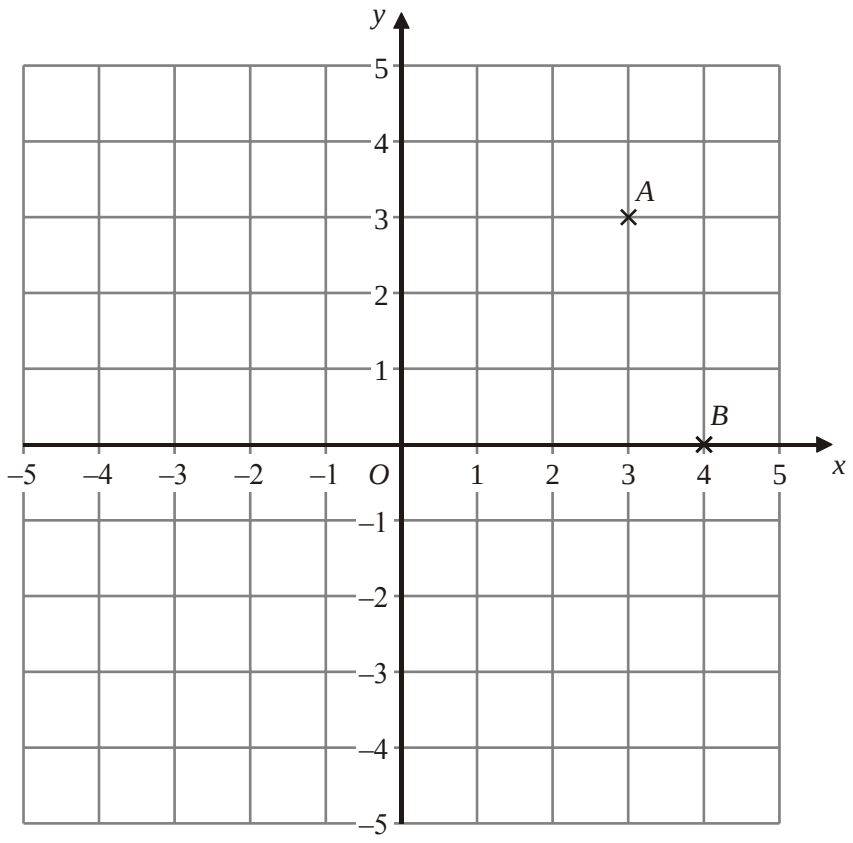
(2)

(b) (i) On the grid, mark the point (6, 4) with the letter *P*.

(ii) On the grid, mark the point (3, 0) with the letter *Q*.

(2)
(Total 4 marks)

5.



(a) Write down the coordinates of the point *A*.

(…….. , ……..)

(1)

(b) Write down the coordinates of the point *B*.

(…….. , ……..)

(1)

N is the point (–3, 2)

(c) On the grid, mark the point *N* with a cross (×). Label it *N*.

(1)

M is another point.
The *x* coordinate of *M* is the same as the *x* coordinate of *N*.
The *y* coordinate of *M* is the same as the *y* coordinate of *B*.

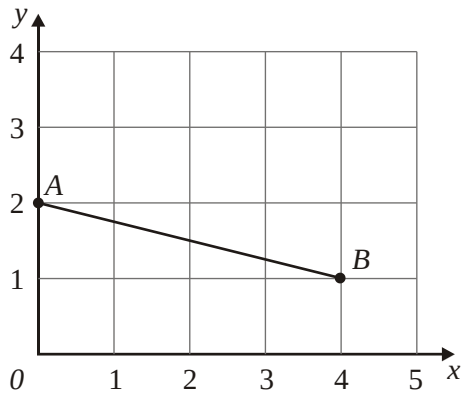
(d) Write down the coordinates of the point *M*.

(…….. , ……..)

(1)

(Total 4 marks)

6.



(a) Write down the coordinates of the point

(i) *A*,

(…….. , ……..)

(ii) *B*.

(…….. , ……..)

(2)

(b) On the grid, mark with a cross (×) the midpoint of the line *AB*.

(1)

(Total 3 marks)

7.

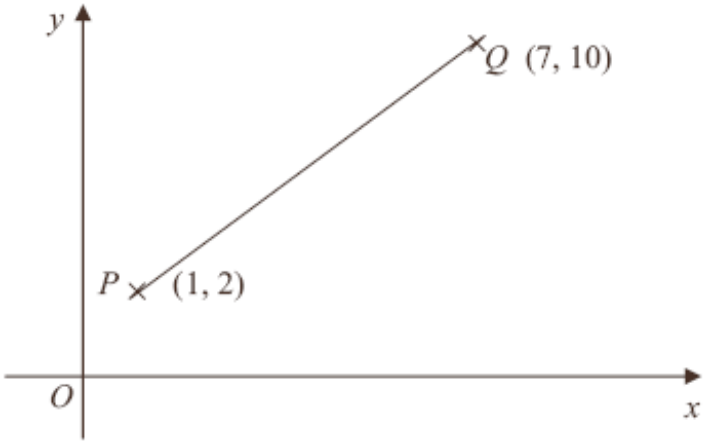


Diagram **NOT** accurately drawn

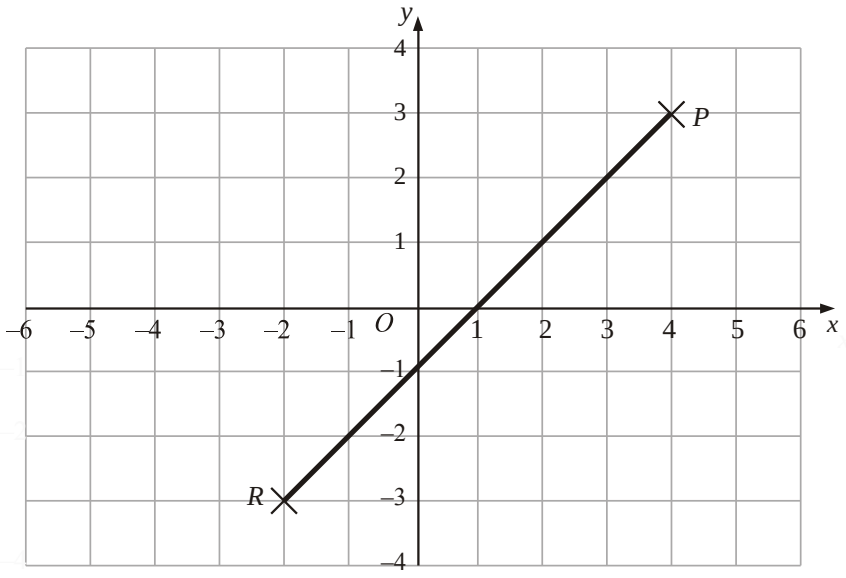
P has coordinates (1, 2)
Q has coordinates (7, 10)

Find the coordinates of the mid-point of the line *PQ*.

(..... , ...)

(Total 2 marks)

8.



(a) Write down the coordinates of the point *P*.

(..... , ...)

(1)

(b) On the grid, mark the point (–3, 1) with a cross (×).
Label the point *Q*.

(1)

(c) Write down the coordinates of the midpoint of the line *PR*.

(..... , ...)

(2)

(Total 4 marks)

9.

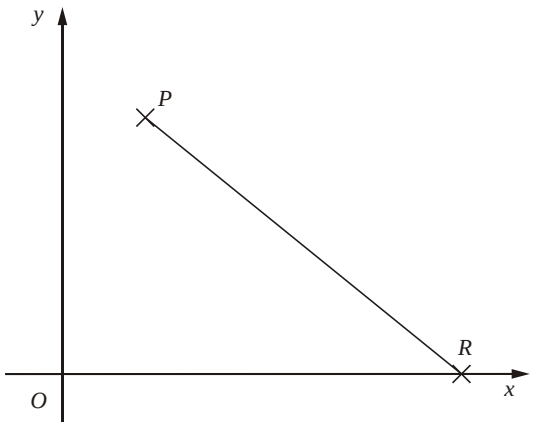


Diagram **NOT** accurately drawn

P has coordinates (1, 4)
R has coordinates (5, 0)

Find the coordinates of the mid-point of the line *PR*.

(..... , ...)

(Total 2 marks)

15 Edexcel GCSE
Mathematics (Linear) – 1MA0

ANGLES

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

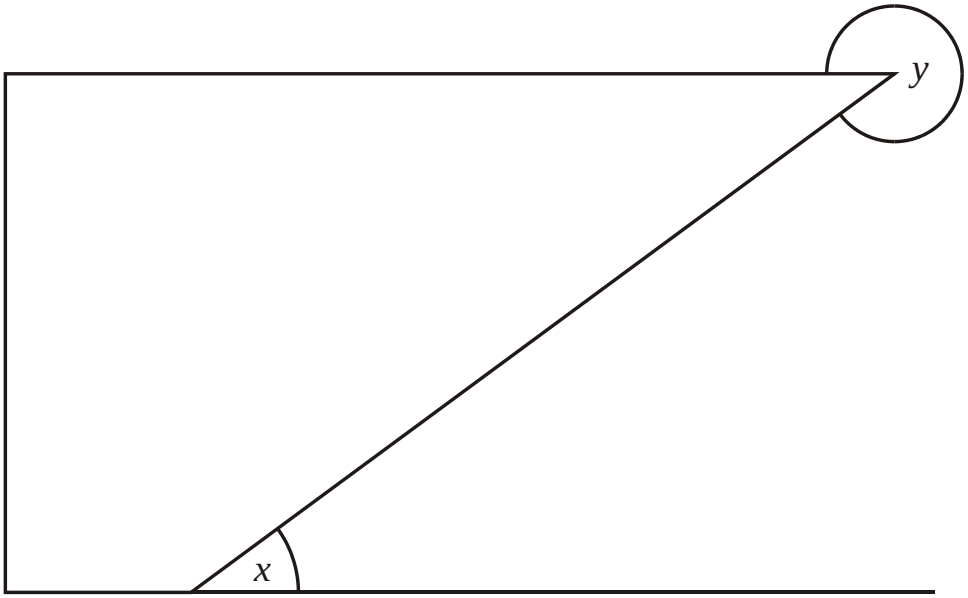
Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1. The lines in the diagram are straight.



(a) Mark with arrows, (>>), a pair of parallel lines.

(1)

(b) Mark with the letter R, a right angle.

(1)

(c) What type of angle is shown by the letter

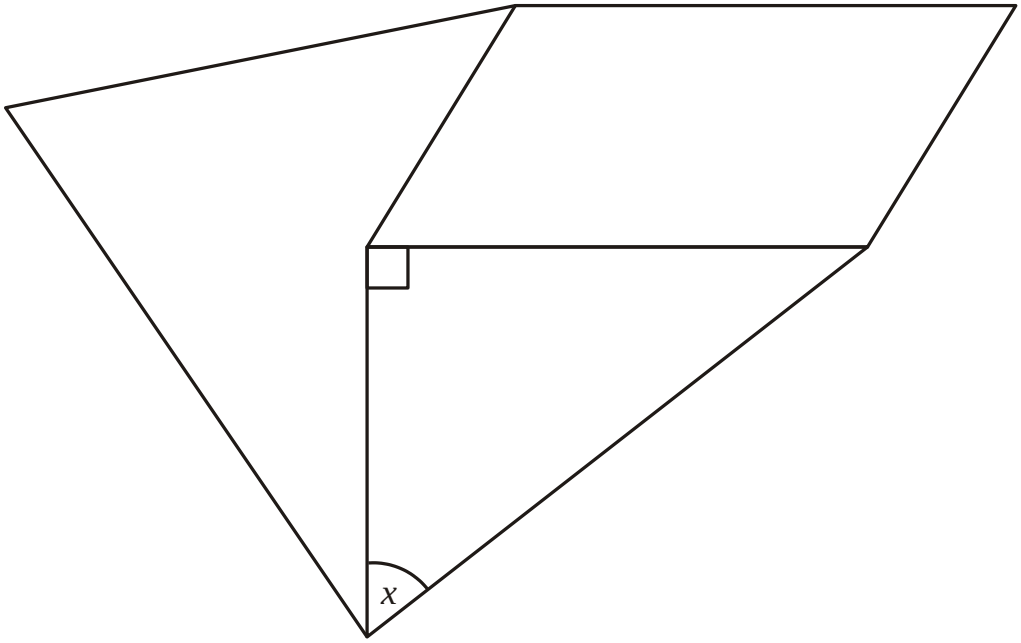
(i) *x*, ...

(ii) *y*. .....

(2)

(Total 4 marks)

2. The shape is made from a right-angled triangle, a parallelogram and a quadrilateral.



(a) Mark with arrows (») a pair of parallel lines.

(1)

(b) Mark with the letter *A* an acute angle.

(1)

(c) Mark with the letter *R* a reflex angle.

(1)

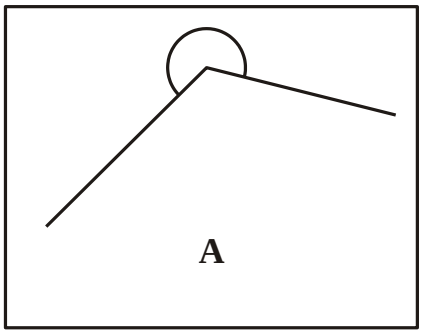
(d) Measure the size of angle x.

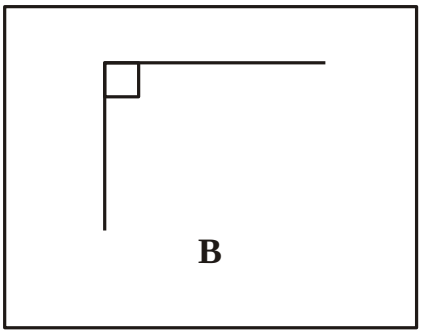
……°

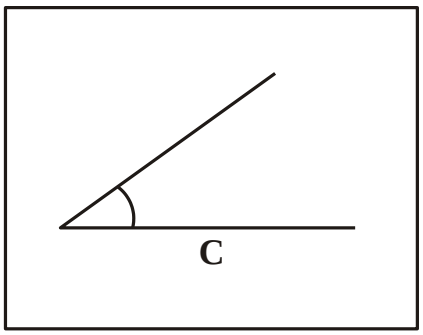
(1)

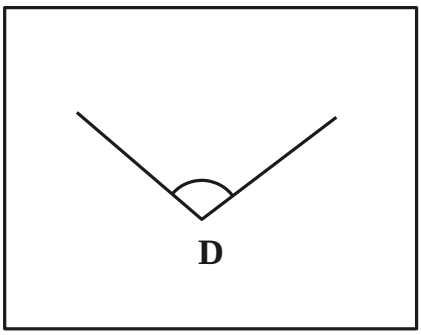
(Total 4 marks)

3.









One of the four angles marked in the diagrams above is an obtuse angle.

(a) Write down the letter of the diagram in which the obtuse angle is marked.

.....

(1)

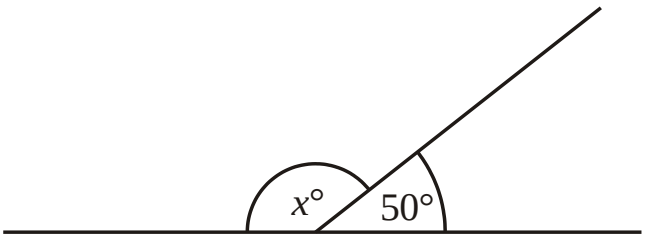


Diagram **NOT** accurately drawn

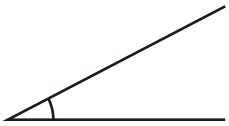
(b) Work out the size of the angle marked $x°$.

..... °

(2)

(Total 3 marks)

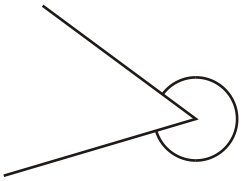
4. (a) Write down the special name for this type of angle.



.....

(1)

(b) Write down the special name for this type of angle.



.....

(1)

(c)

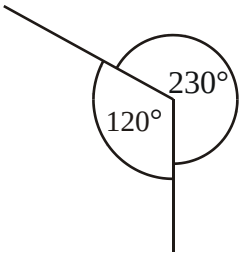


Diagram **NO**T
accurately drawn

This diagram is wrong.
Explain why

.....

.....

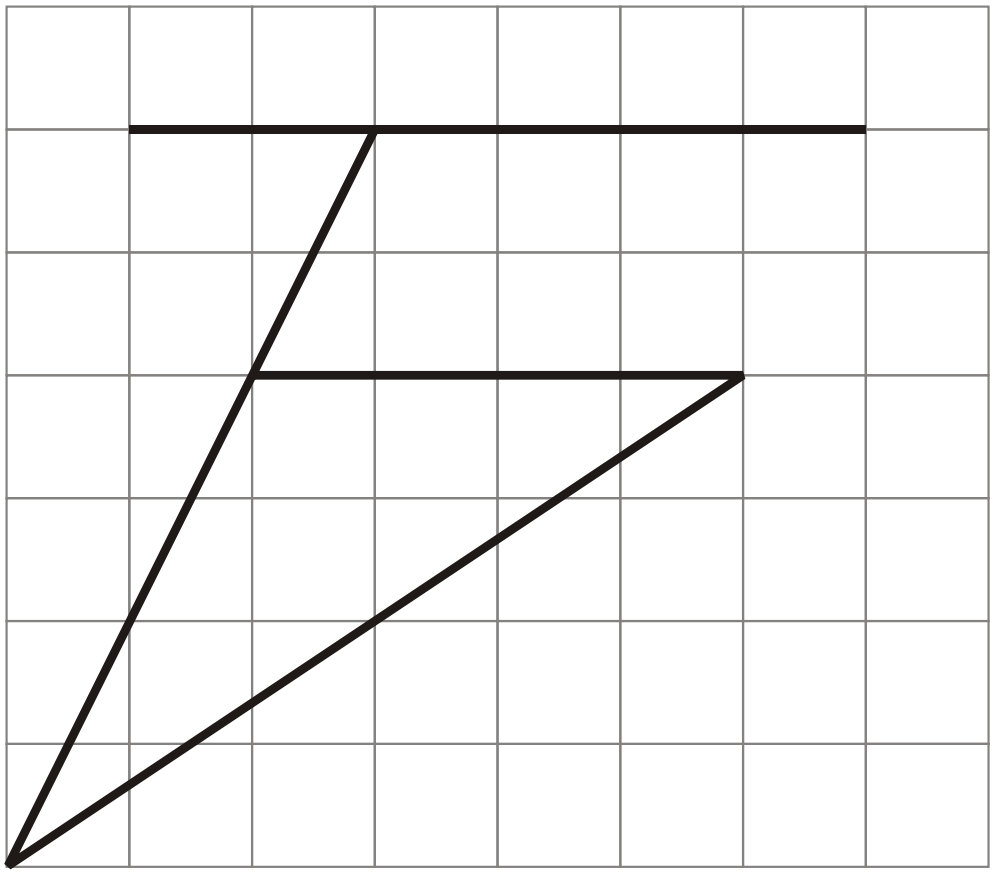
.....

.....

(1)

(Total 3 marks)

5. Here is a diagram drawn on a square grid.



(a) Mark, with arrows (>>), a pair of parallel lines.

(1)

(b) Mark, with the letter A, an acute angle.

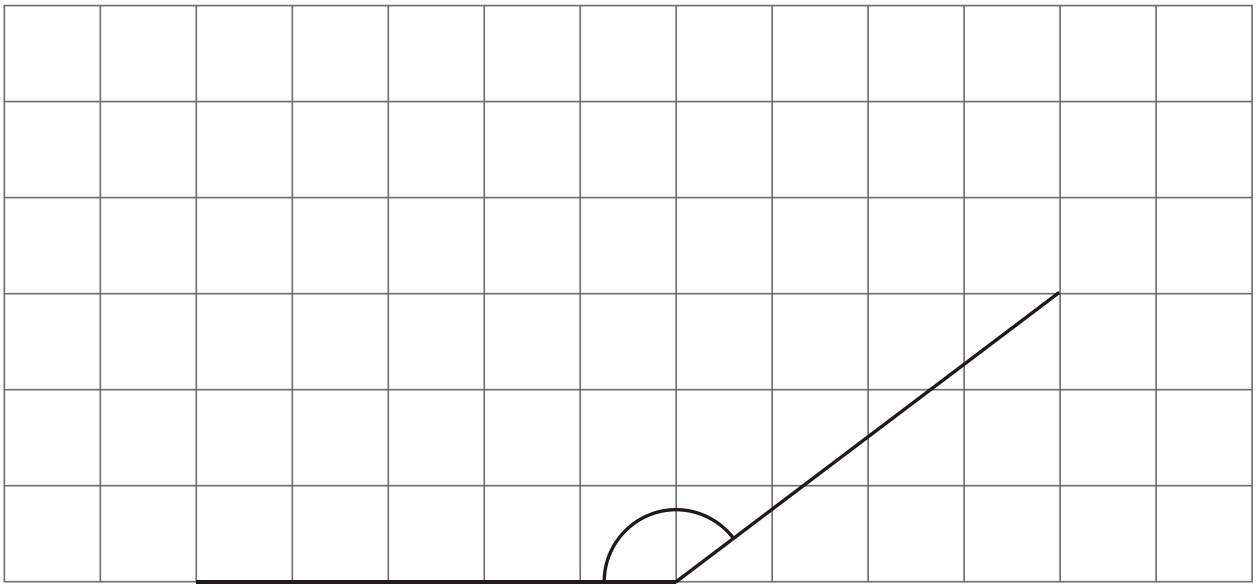
(1)

(c) Mark, with the letter O, an obtuse angle.

(1)

(Total 3 marks)

6. The diagram shows two sides of a rhombus drawn on a grid of centimetre squares.



(a) (i) Measure the size of the angle between these two sides.

……°

(ii) What type of angle have you measured?

……

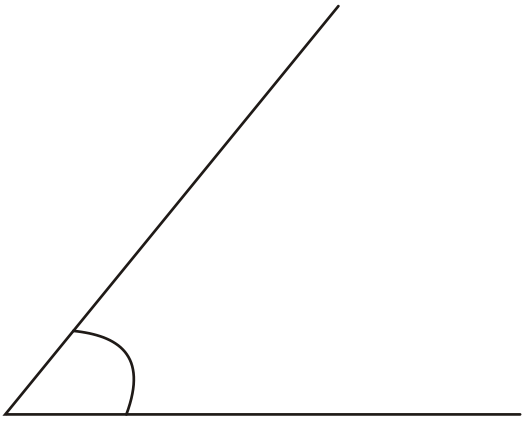
(2)

(b) Complete accurately the drawing of the rhombus.

(1)

(Total 3 marks)

7. The diagram shows an angle.



(a) Write down the special name for this type of angle.

……

(1)

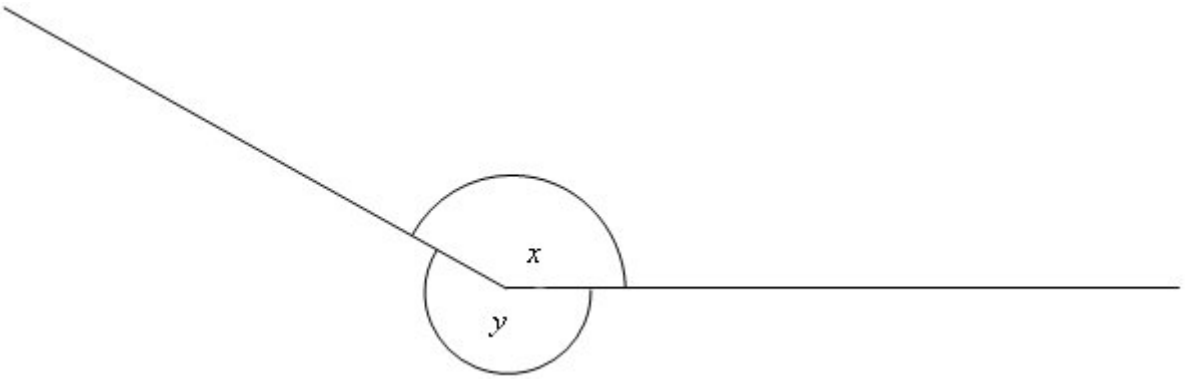
(b) Measure the size of the angle.

……°

(1)

(Total 2 marks)

8.



(a) Measure the size of the angle marked *x*.

.....°

(1)

(b) What type of angle is shown by the letter *y* ?

.....

(1)

(Total 2 marks)

16 Edexcel GCSE
Mathematics (Linear) – 1MA0

CONGRUENT SHAPES

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

Information

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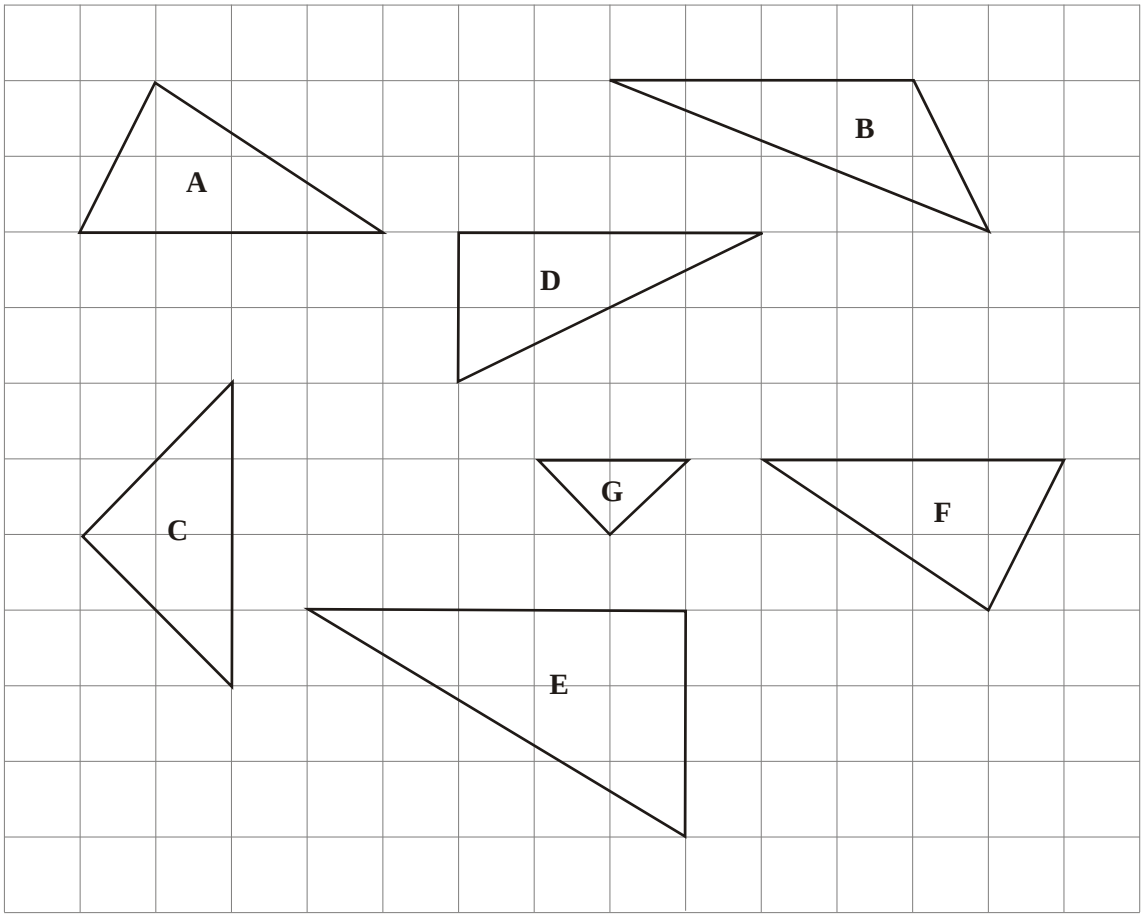
Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1.



(a) Write down the letter of an isosceles triangle.

.....

(1)

(b) Write down the letters of **two** triangles which are congruent.

..... and .....

(1)

Triangle **C** is an enlargement of triangle **G**.

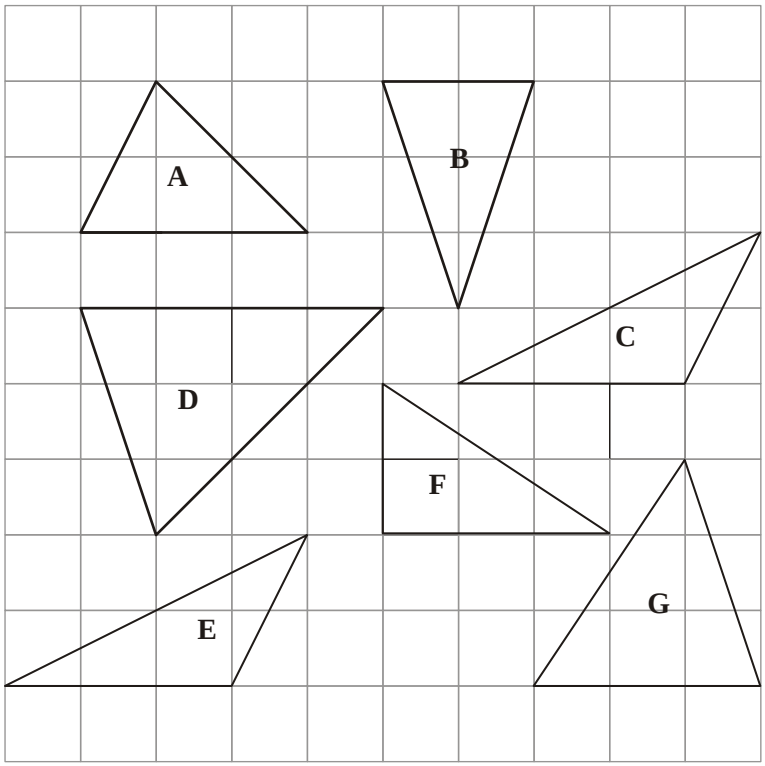
(c) Write down the scale factor of this enlargement.

.....

(1)

(Total 3 marks)

2. Here are some triangles.



(a) Write down the letter of the triangle that is

(i) right-angled,

.....

(ii) isosceles.

.....

(2)

Two of the triangles are congruent.

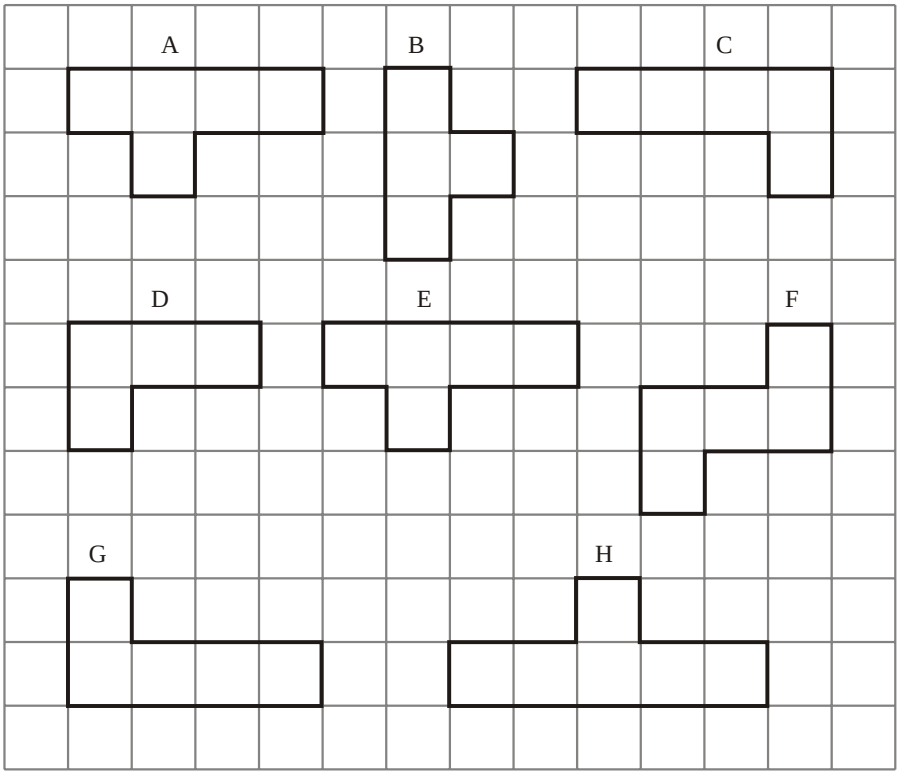
(b) Write down the letters of these two triangles.

..... and .....

(1)

(Total 3 marks)

3. Here are 8 shapes.



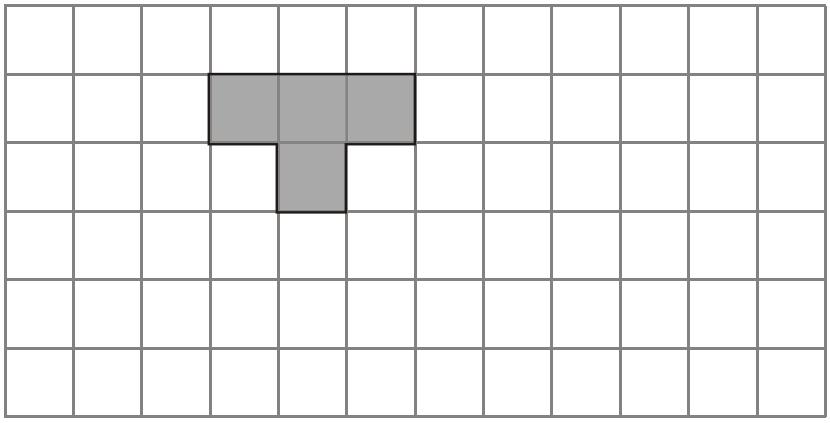
(a) Write down the letters of two **different** pairs of congruent shapes.

..... and .....

..... and .....

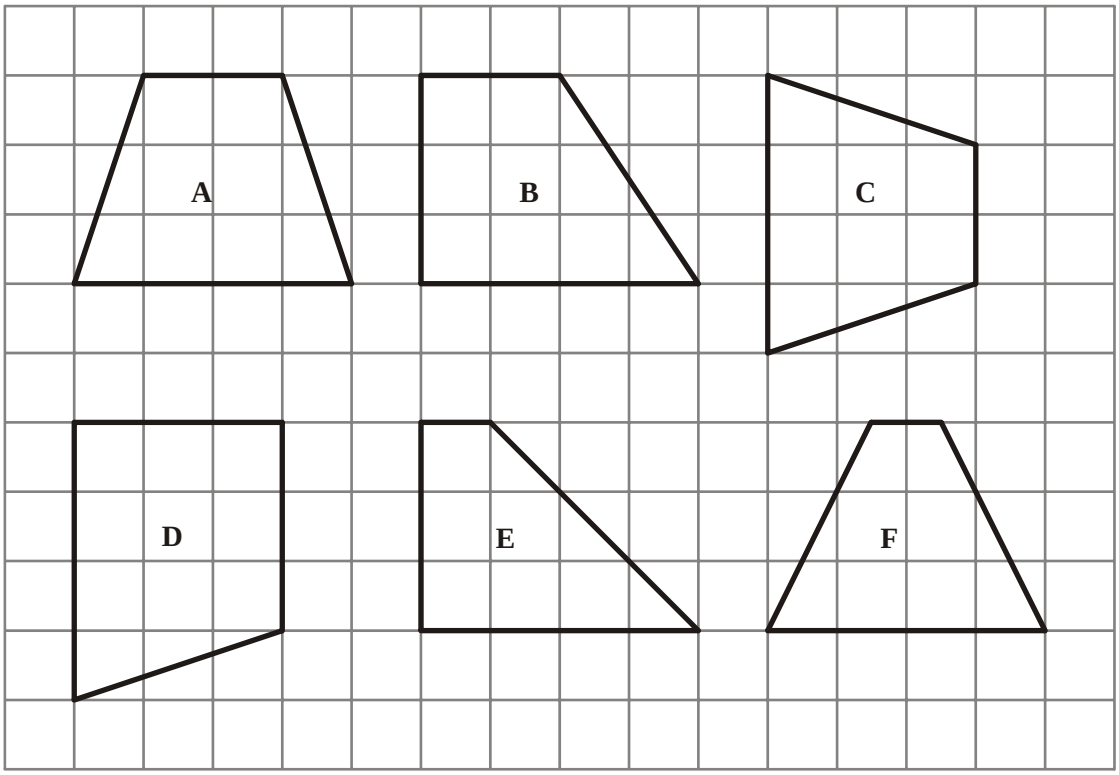
(2)

(b) On the grid, show how the shaded shape will tessellate.
You must draw at least 6 shapes.



(2)
(Total 4 marks)

4. Here are 6 shapes drawn on a grid.



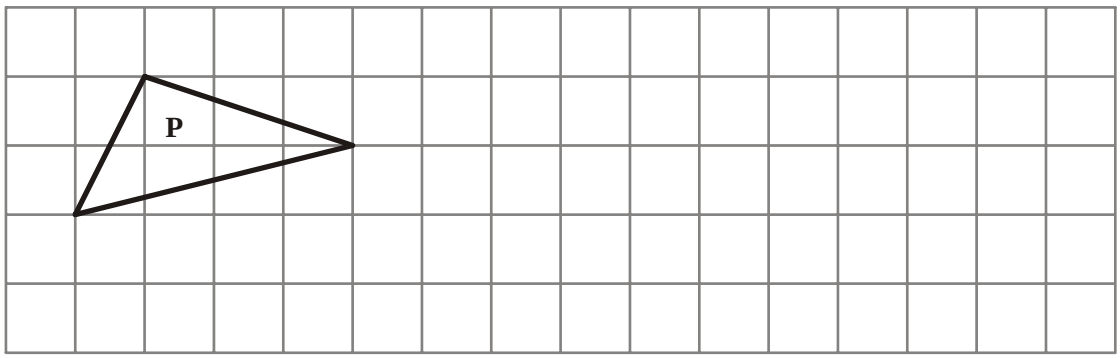
Two of these shapes are congruent.

(a) Write down the letters of these two shapes.

..... and .....

(1)

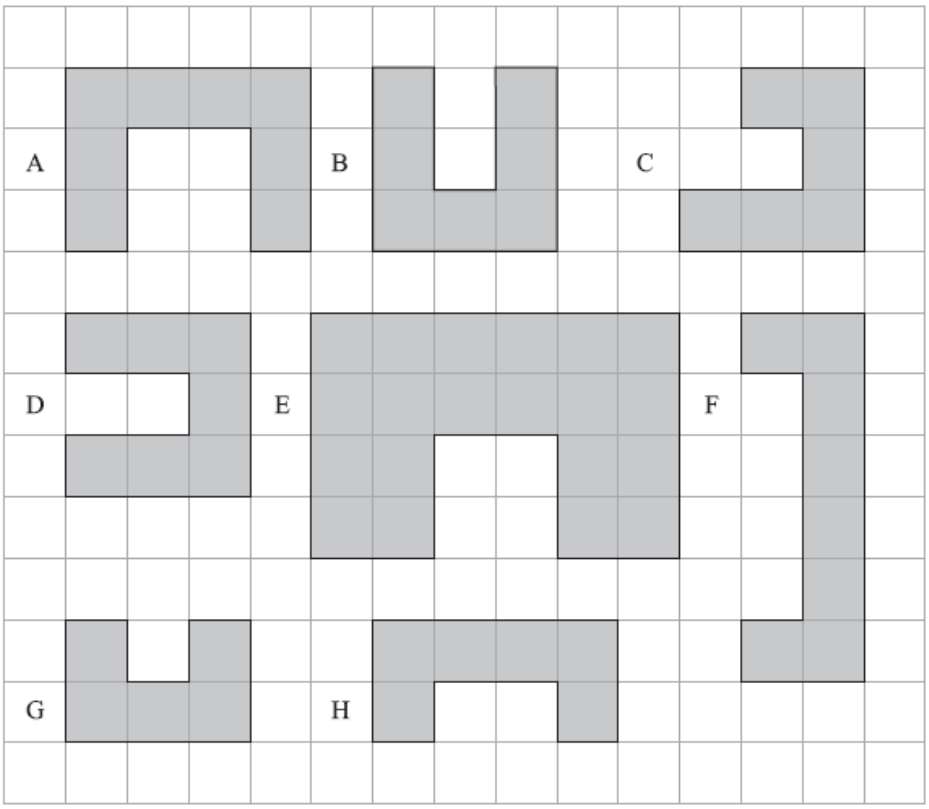
(b) On the grid below, draw a shape that is congruent to shape **P**.



(1)

(Total 2 marks)

5. These shapes have been drawn on a grid of centimetre squares.



(a) (i) Write down the letters of a pair of shapes that are congruent.

..... and .....

(ii) Write down the letters of a different pair of shapes that are similar.

..... and .....

(2)

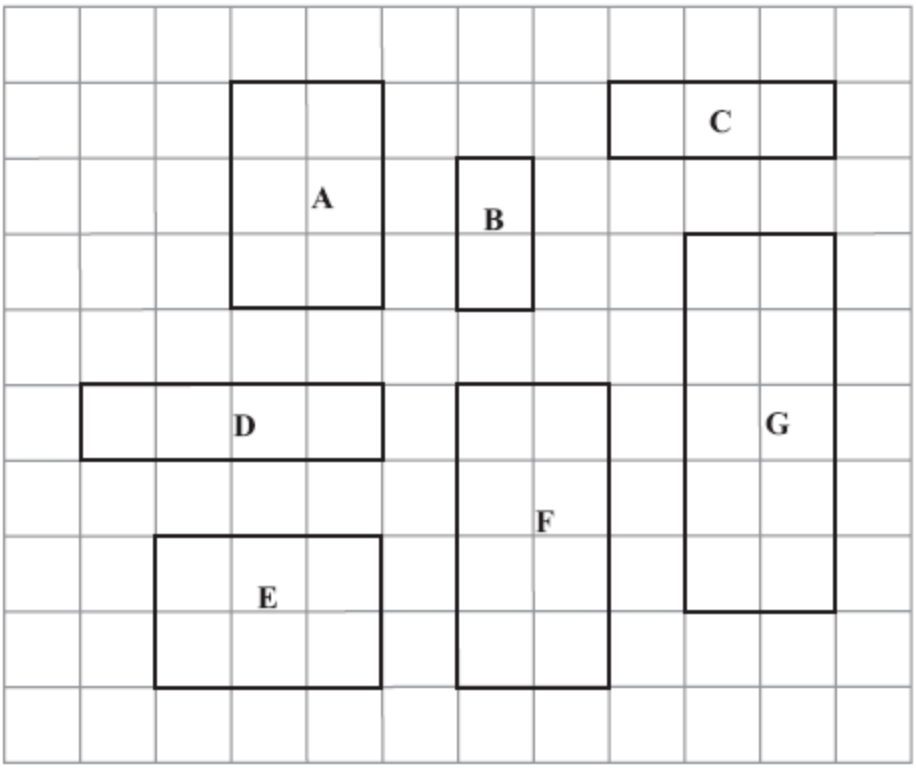
(b) Find the perimeter of shape D.

..... cm

(1)

(Total 3 marks)

6. Here are some rectangles on a grid of centimetre squares.



(a) Find the area of rectangle **G**.

.....cm^2
(1)

(b) Find the perimeter of rectangle **B**.

.....cm
(1)

Two of the rectangles are congruent.

(c) Write down the letters of these two rectangles.

..... and .....
(1)

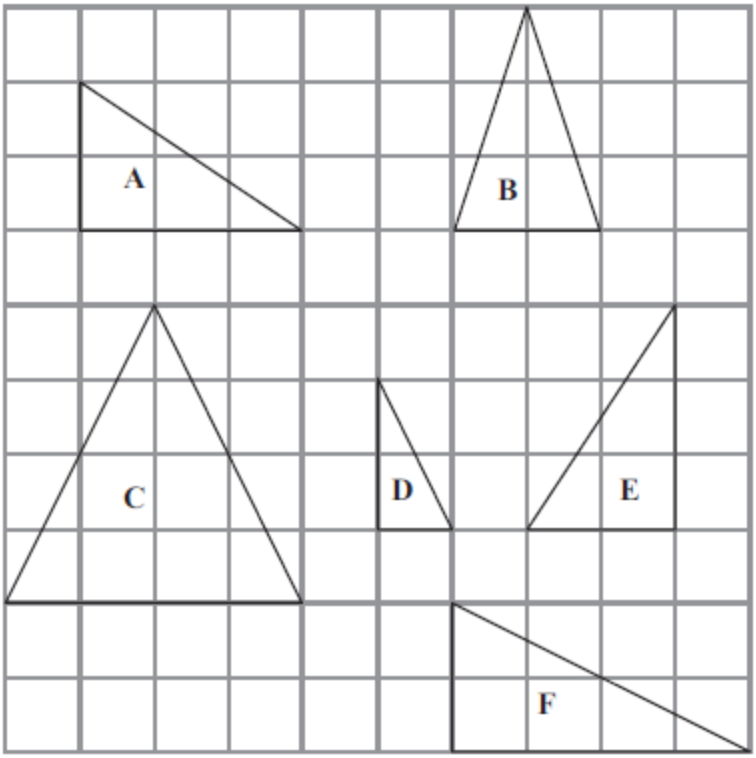
Rectangle **F** is an enlargement of rectangle **B**.

(d) Write down the scale factor of the enlargement.

.....
(1)

(Total 4 marks)

7. Here are some triangles drawn on a square grid.



Two of the triangles are congruent.

(a) Write down the letters of these two triangles.

..... and .....

(1)

One of the triangles is an enlargement of another of the triangles.

(b) Write down the letters of these two triangles.

..... and .....

(1)

Two of the triangles each have one line of symmetry.

(c) Write down the letters of these two triangles.

..... and .....

(1)

(Total 3 marks)

17 Edexcel GCSE
Mathematics (Linear) – 1MA0

SIMPLE PERIMETER, AREA & VOLUME

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

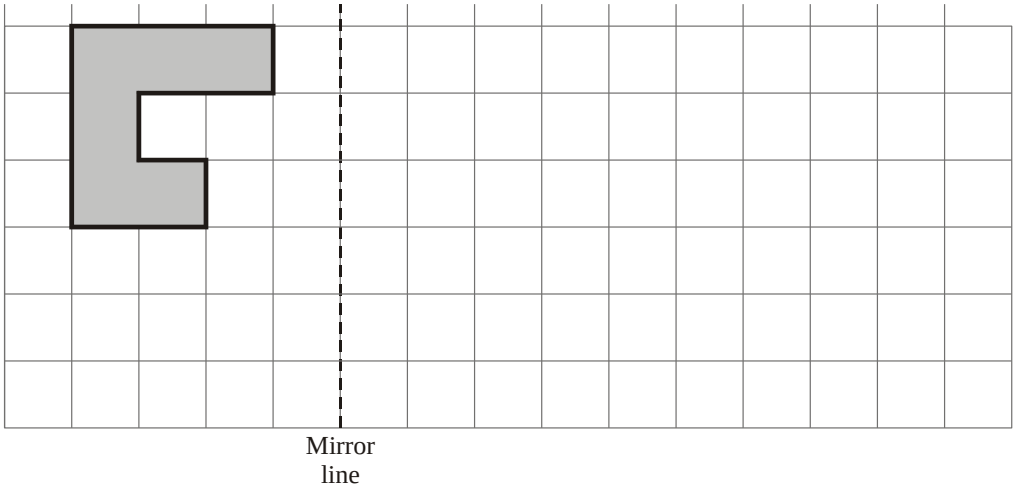
Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1. A shaded shape is shown on the grid of centimetre squares.



(a) Work out the perimeter of the shaded shape.

.....cm

(1)

(b) Work out the area of the shaded shape.

.....cm^2

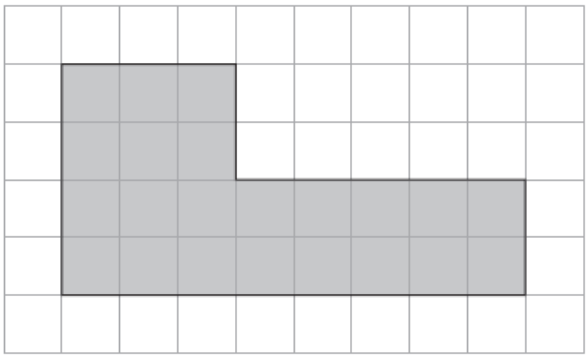
(1)

(c) Reflect the shaded shape in the mirror line.

(2)

(4 marks)

2.



The shaded shape is drawn on a grid of centimetre squares.

(a) Find the perimeter of the shaded shape. ..... cm

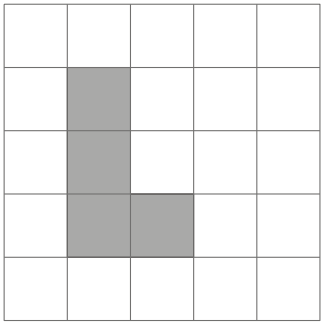
(1)

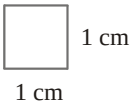
(b) Find the area of the shaded shape. ..... cm^2

(1)

(2 marks)

3.



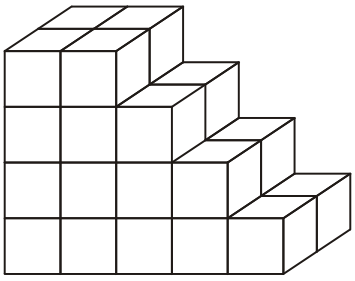


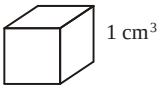
(a) (i) Find the area of the shaded shape. ..... cm^2

(ii) Find the perimeter of the shaded shape. ..... cm

(2)

Here is a solid prism made from centimetre cubes.



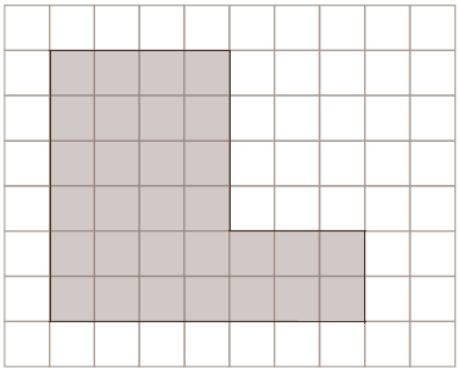


(b) Find the volume of the solid prism. ..... cm^3

(2)

(4 marks)

4.



A shaded shape is shown on the grid of centimetre squares.

(a) Find the perimeter of the shaded shape. .....cm

(1)

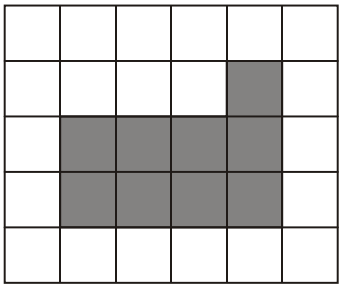
(b) Find the area of the shaded shape. .....cm^2

(1)

(2 marks)

---

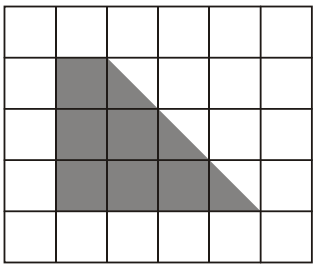
5. A shaded shape has been drawn on a grid of centimetre squares.



(a) Find the perimeter of the shaded shape. .....cm

(1)

Another shaded shape has been drawn on a grid of centimetre squares.



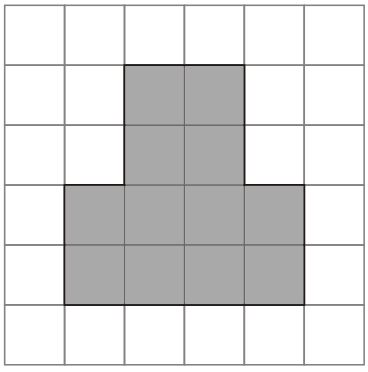
(b) Find the area of the shaded shape. ..... cm^2

(2)

(3 marks)

---

6. This shaded shape is drawn on a centimetre grid.



(a) Work out the perimeter of the shaded shape.

..... cm

(1)

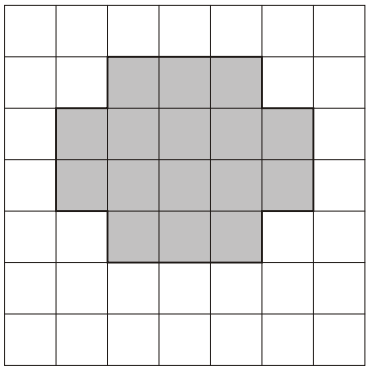
(b) Work out the area of the shaded shape.

..... cm^2

(1)

(2 marks)

7.



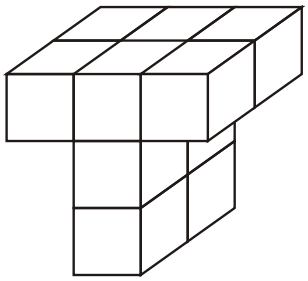
The diagram shows a shaded shape drawn on a centimetre grid.

(a) Find the area of the shaded shape.
State the units of your answer. ……

(2)

(b) Find the perimeter of the shaded shape. ……cm

(1)



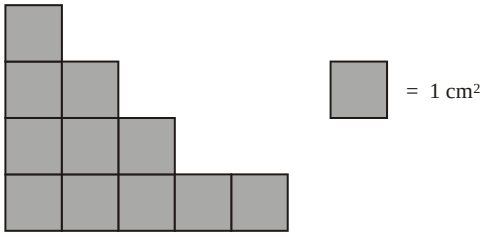
The diagram shows a prism made of centimetre cubes.

(c) Find the volume of the prism. ……cm^3

(2)

(5 marks)

8.



(a) Find the area of the shape. …..……. cm^2

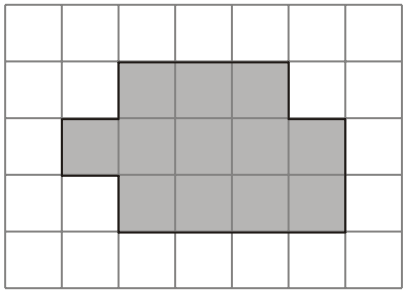
(1)

(b) Find the perimeter of the shape. …...……

(2)

(3 marks)

9.



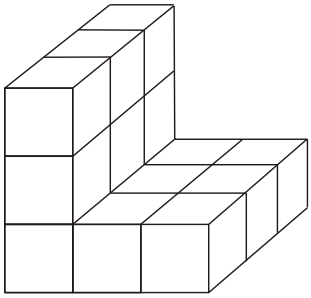
The diagram shows a shaded shape drawn on a centimetre grid.

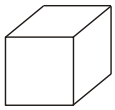
(a) Work out the perimeter of the shaded shape. ..... cm

(1)

(b) Work out the area of the shaded shape.
State the units of your answer. .....

(2)





represents
1 cm^3

Here is a solid prism made of centimetre cubes.

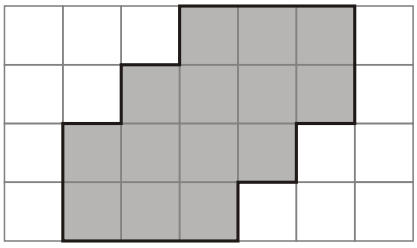
(c) Find the volume of the solid prism. ..... cm^3

(2)

(5 marks)

---

10. This shaded shape is drawn on a grid of centimetre squares.



(a) Find the perimeter of the shaded shape. ..... cm

(1)

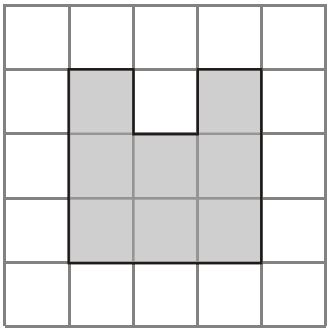
(b) Find the area of the shaded shape. ..... cm^2

(1)

(2 marks)

---

11. Here is a shaded shape on a centimetre grid.



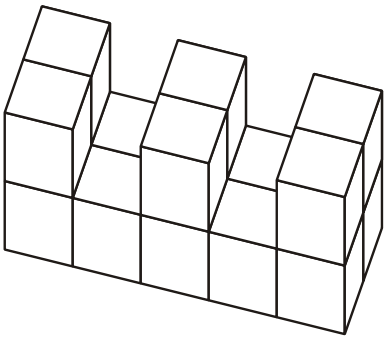
(a) Find the area of the shaded shape. ..... cm^2

(1)

(b) Find the perimeter of the shaded shape. ..... cm

(2)

Here is a solid prism made of centimetre cubes.



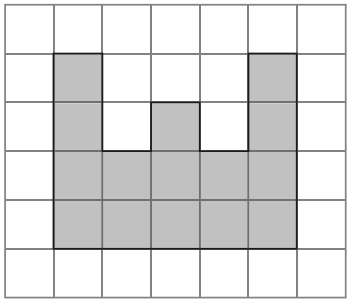
(c) Find the volume of the solid prism. ..... cm^3

(2)

(5 marks)

---

12. A shaded shape has been drawn on the centimetre grid.



(a) Find the perimeter of the shaded shape. ..... cm

(1)

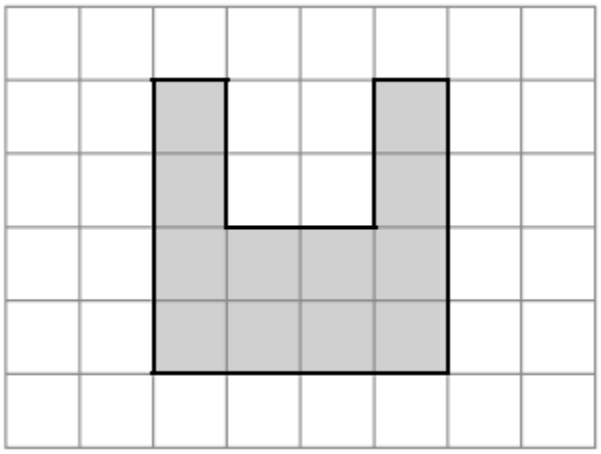
(b) Find the area of the shaded shape. ..... cm^2

(1)

(2 marks)

---

13. This shaded shape is drawn on a grid of centimetre squares.



(a) (i) Find the perimeter of the shaded shape.

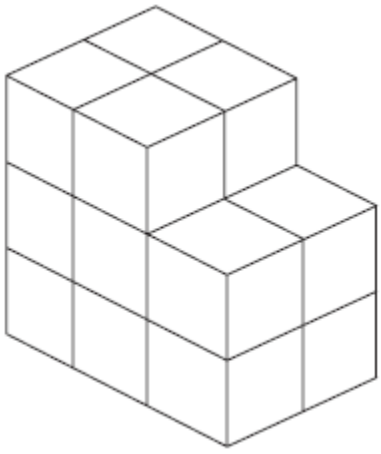
..... cm

(ii) Find the area of the shaded shape.

..... cm^2

(2)

This solid prism is made from centimetre cubes.



(b) Find the volume of the prism.

..... cm^3

(1)

(Total 3 marks)

18 Edexcel GCSE
Mathematics (Linear) – 1MA0

METRIC & IMPERIAL MEASURES

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1. Complete this table.
Write a sensible unit for each measurement.

	Metric	**Imperial**
The height of a bus	.....	feet
The distance between two towns	kilometres	.....

(2 marks)

2. Complete this table.
Write a sensible unit for each measurement.

	Metric	Imperial
The weight of a turkey	…….	pounds
The volume of water in a swimming pool	…….	gallons
The width of this page	centimetres	…….

(3 marks)

3. Complete this table by writing a sensible unit for each measurement.

	Metric	**Imperial**
The height of a door	.....	feet
The weight of a man	kilograms	.....
The volume of water in a bucket	.....	gallons

(3 marks)

4. (a) Write down a sensible **metric** unit that can be used to measure

(i) the height of a tree,

.....

(ii) the weight of a person.

.....

(2)

(b) Change 2 centimetres to millimetres.

..... millimetres

(1)

(3 marks)

---

5. (a) Write down the name of a sensible **metric** unit that can be used to measure

(i) the weight of a grape,

.....

(ii) the diameter of a CD.

.....

(2)

(b) Change 7 kilometres to metres. ..... m

(1)

(3 marks)

---

6. (a) Write down the name of the **metric** unit used to measure

(i) the weight of a man,

.....

(ii) the distance from New York to London.

.....

(2)

(b) Change 4 metres to centimetres.

..... cm

(1)

(c) Change 9000 millilitres to litres.

..... litres

(1)

(4 marks)

---

7. (a) (i) Change 5.6 metres to centimetres.

……cm

(ii) Change 6700 millilitres to litres.

……litres

(2)

(b) Write down the name of the **metric** unit which is usually used to measure the weight of a person.

(1)

(3 marks)

---

8. (a) Write down a sensible **metric** unit that should be used to measure

(i) the height of a school hall,

.....

(ii) the weight of a pencil.

.....

(2)

(b) Write down a sensible **imperial** unit that should be used to measure the distance between London and Manchester.

.....

(1)

(3 marks)

---

9. (a) Write down a sensible **metric** unit for measuring

(i) the distance from London to Paris,

.....

(ii) the amount of water in a swimming pool.

.....

(2)

(b) (i) Change 5 centimetres to millimetres.

..... mm

(ii) Change 4000 grams to kilograms.

..... kg

(2)

(4 marks)

---

10. (a) Complete the table by writing a sensible metric unit on each dotted line.
The first one has been done for you.

The distance from London to Birmingham	179 kilometres
The weight of a twenty pence coin	5 …….
The height of the tallest living man	232 …….
The volume of lemonade in a glass	250 …….

(3)

(b) Change 5000 metres to kilometres.

……km

(1)

(4 marks)

---

11. (a) Complete this table.
Write a sensible unit for each measurement.
Three have been done for you.

	Metric	**Imperial**
The length of your finger	.....	inches
The distance between America and England	kilometres	.....
The amount of petrol in a petrol tank	.....	gallons

(3)

(b) Change 3 metres to centimetres.

..... cm

(1)

(c) Shalim says 1.5 km is less than 1400 m.
Is he right?
Explain your answer.

.....

.....

(1)

(5 marks)

---

12. (a) Write down the name of a **metric** unit which is used to measure

(i) the distance from London to Brighton,

……

(ii) the weight of a bar of soap.

……

(2)

(b) (i) Change 240 millimetres to centimetres.

……cm

(ii) Change 3.8 litres to millilitres.

……ml

(2)

(4 marks)

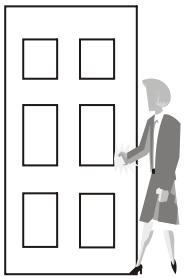
---

13. (a) Complete this table.
Write a sensible unit for each measurement.
Three have been done for you.

	Metric	**Imperial**
Distance from London to Cradiff	km	……
Weight of a bag of potatoes	……	pounds
Volume of fuel in a car's fuel tank	……	gallons

(3)

(b) Here is a picture of a woman opening a door that is 2 m high.
Estimate the height of the woman.



..... m

(2)

(4 marks)

---

14. (a) Complete the table by writing a sensible **metric** unit for each measurement.
The first one has been done for you.

The length of the river Nile	6700 .....kilometres.....
The height of the world's tallest tree	110 .....
The weight of a chicken's egg	70 .....
The amount of petrol in a full petrol tank of a car	40 .....

(3)

(b) Change 4 metres to centimetres. ..... cm

(1)

(c) Change 1500 grams to kilograms. ..... kg

(1)

(5 marks)

---

15. Write down a sensible **metric** unit for each measurement.

(i) The weight of a pair of sunglasses.

.....

(ii) The height of a house.

.....

(iii) The volume of toothpaste in a tube of toothpaste.

.....

(3 marks)

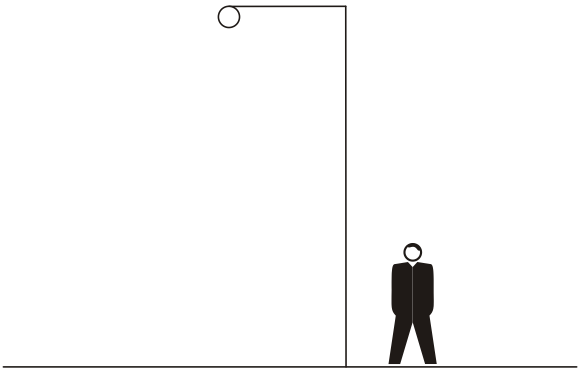
---

16. Complete this table.
Write a sensible unit for each measurement.

	Metric	**Imperial**
The weight of a bicycle	.....	pounds
The volume of water in a watering can	.....	pints
The length of this page	centimetres	.....

(3 marks)

17.



The diagram shows a man standing next to a lamppost.
The man is of normal height.

(a) Write down an estimate for the height, in metres, of the man.

..... m

(1)

(b) Estimate the height, in metres, of the lamppost.

..... m

(2)

(3 marks)

---

18. (a) Complete this table.
Write a sensible unit for each measurement.

	Metric	**Imperial**
Diameter of a football	.....	inches
Amount of fuel in a car fuel tank	litres	.....

(2)

(b) (i) Change 4 kg to grams.

..... grams

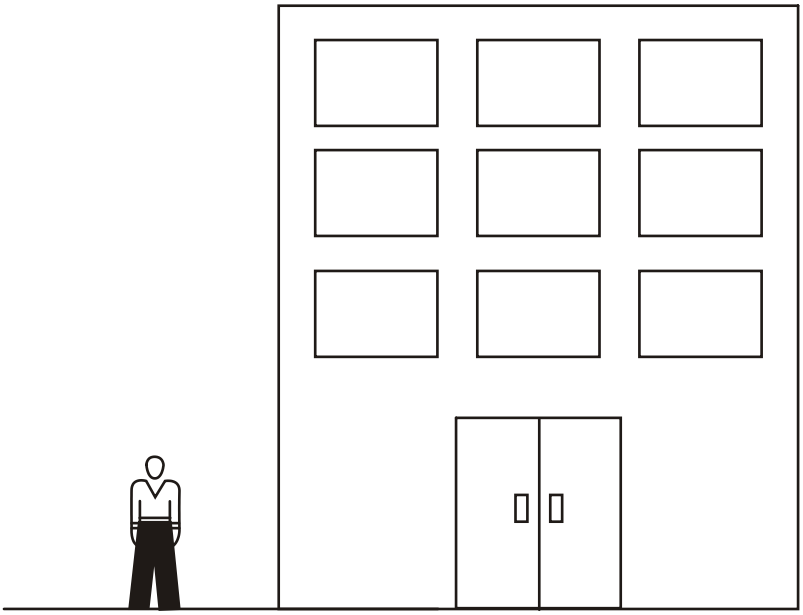
(ii) Change 3500 ml to litres.

..... litres

(2)

(4 marks)

19.



The diagram shows a building and a man.
The man is of normal height.
The man and the building are drawn to the same scale.

(a) Write down an estimate for the height of the man.

.....

(1)

(b) Write down an estimate for the height of the building.

.....

(2)

(3 marks)

20. Complete this table.

Write a sensible unit for each measurement.

	Metric	Imperial
The weight of a chicken	…….	pounds
The volume of water in a petrol tanker	…….	gallons
The length of a finger	centimetres	…….

(3 marks)

21.

The picture shows a man standing next to a flagpole.
The man is of normal height.
The man and the flagpole are drawn to the same scale.

(a) Write down an estimate for the height, in metres, of the man.

..... m

(1)

(b) Work out an estimate for the height, in metres, of the flagpole.

..... m

(2)

(3 marks)

---

22. (a) Write down a sensible metric unit for measuring

(i) the distance from London to Birmingham,

.....

(ii) the weight of a pencil.

.....

(2)

(b) (i) Change 7 centimetres to millimetres.

..... mm

(ii) Change 4500 grams to kilograms.

..... kg

(2)

(4 marks)

23.

The diagram shows a man and a bus.
The man and the bus are drawn to the same scale.
The man is of average height.

(i) Write down an estimate for the height of the man.

.....

(ii) Find an estimate for the length of the bus.

.....

(4 marks)

---

24. (a) Write a sensible unit for each measurement.

	Metric	Imperial
The weight of a man	…….	pounds
The volume of water in a bath	…….	gallons
The length of an arm	centimetres	…….

(3)

(b) Change 6.8 metres to centimetres. ..... cm

(1)

(c) Change 7500 grams to kilograms. ..... kg

(1)

(5 marks)

NOTES

DISTANCE

METRIC		*IMPERIAL*
Kilometres	**km**	**Miles**
Metres	**m**	**Yards**
Centimetres	**cm**	**Feet**
Millimetres	**mm**	**Inches**

- **1 km = 1000m**
- **1m = 100cm**
- **1cm = 10mm**

WEIGHT

METRIC		*IMPERIAL*
Kilograms	**kg**	**Ton**
Grams	**g**	**Stone**
Milligrams	**mg**	**Pounds**
		Ounces

- **1 kg = 1000g**
- **1g = 1000g**

CAPACITY / VOLUME

METRIC		*IMPERIAL*
Litres	***l***	**Gallons**
Millilitres	***ml***	**Pints**

- **1 *l* = 1000*ml***

19 Edexcel GCSE
Mathematics (Linear) – 1MA0

2D & 3D SHAPES

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

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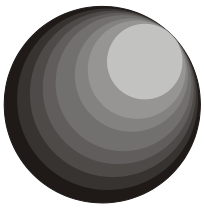
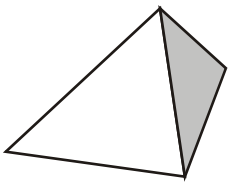
Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1. Write down the mathematical name for each of these three different 3-D shapes.

(i) (ii) (iii)

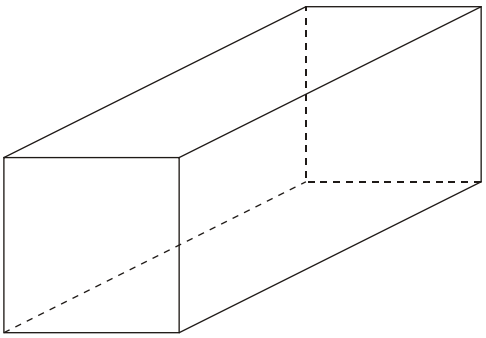




(i) ..... (ii) ..... (iii) .....

(3 marks)

2.



Here is a diagram of a cuboid.

Write down the number of

(i) faces .....

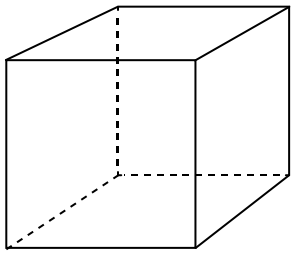
(ii) edges .....

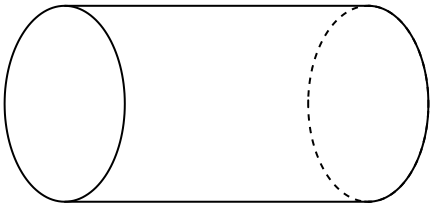
(iii) vertices .....

(3 marks)

3. Write down the mathematical name of each of these 3-D shapes.

(i) (ii)



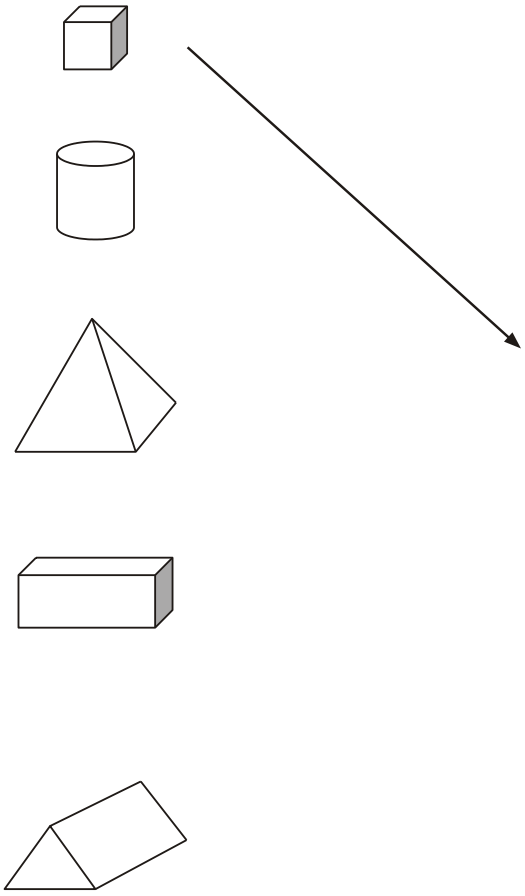


(i) ..... (ii) .....

(2 marks)

4. The diagram shows some solid shapes and some mathematical names.
An arrow has been drawn from one solid shape to its mathematical name.

Draw an arrow from each of the other solid shapes to its mathematical name.
The cube has been done for you.



pyramid

triangular prism

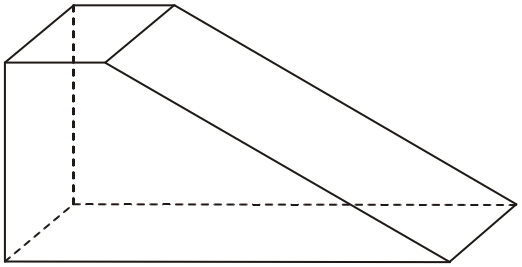
cube

cylinder

cuboid

(3 marks)

5. Here is a diagram of a 3-D prism.



Write down the number of (i) faces, ...

(ii) edges, ...

(iii) vertices. .....

(3 marks)

6. The diagram shows a solid triangular prism.

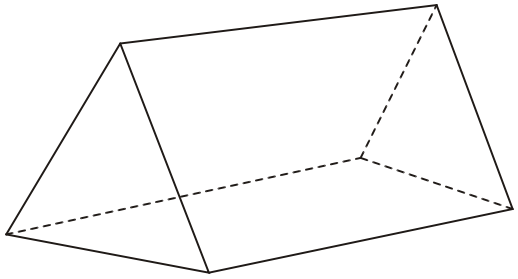


Diagram **NOT** accurately drawn

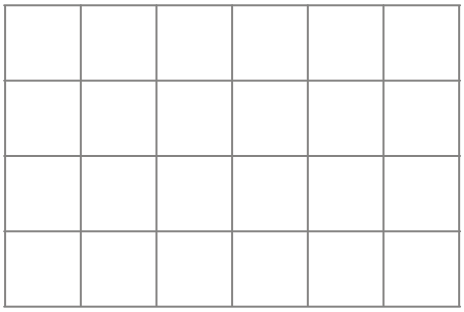
Write down

(i) the number of faces .....

(ii) the number of edges .....

(iii) the number of vertices .....

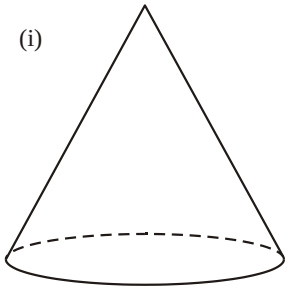
(iv) On the grid below, draw a trapezium.



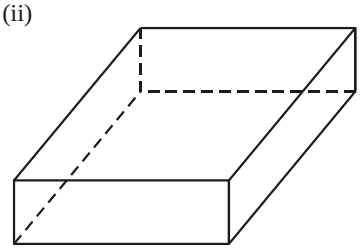
(4 marks)

7. Write down the name of each of these two 3-D shapes.

(i)



(ii)



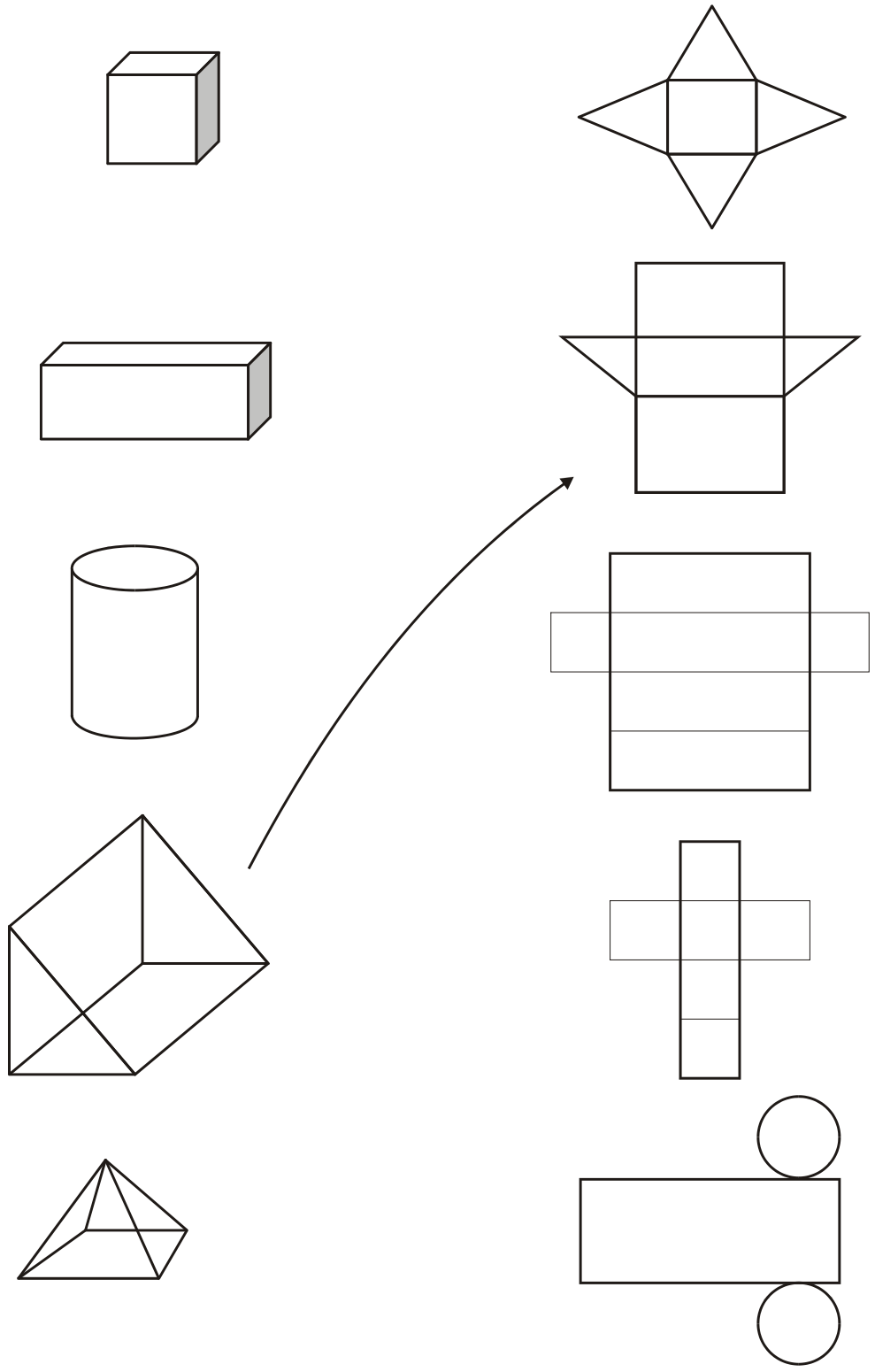
(i) .....

(ii) .....

(2 marks)

8. The diagrams show some solid shapes and their nets.
An arrow has been drawn from one solid shape to its net.

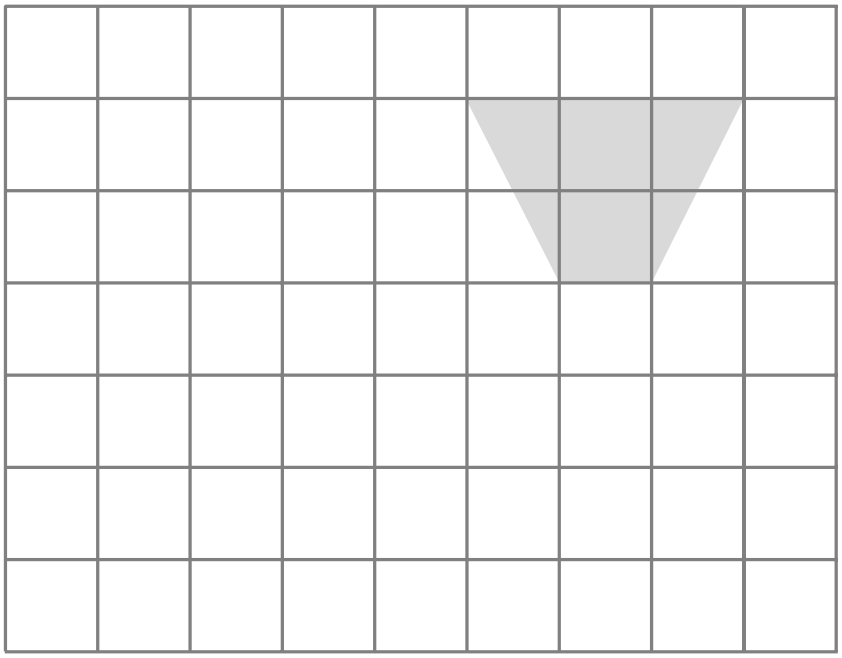
Draw an arrow from each of the other solid shapes to its net.



(3 marks)

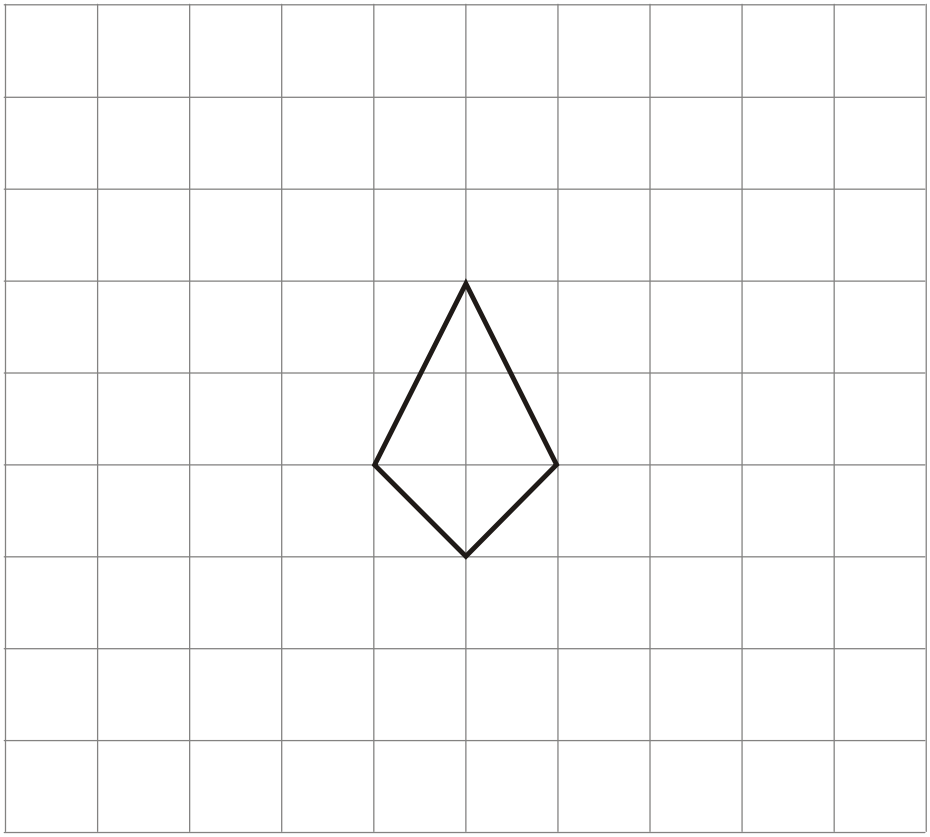
9. On the grid, show how this shape tessellates.

You should draw at least 6 shapes.



(3 marks)

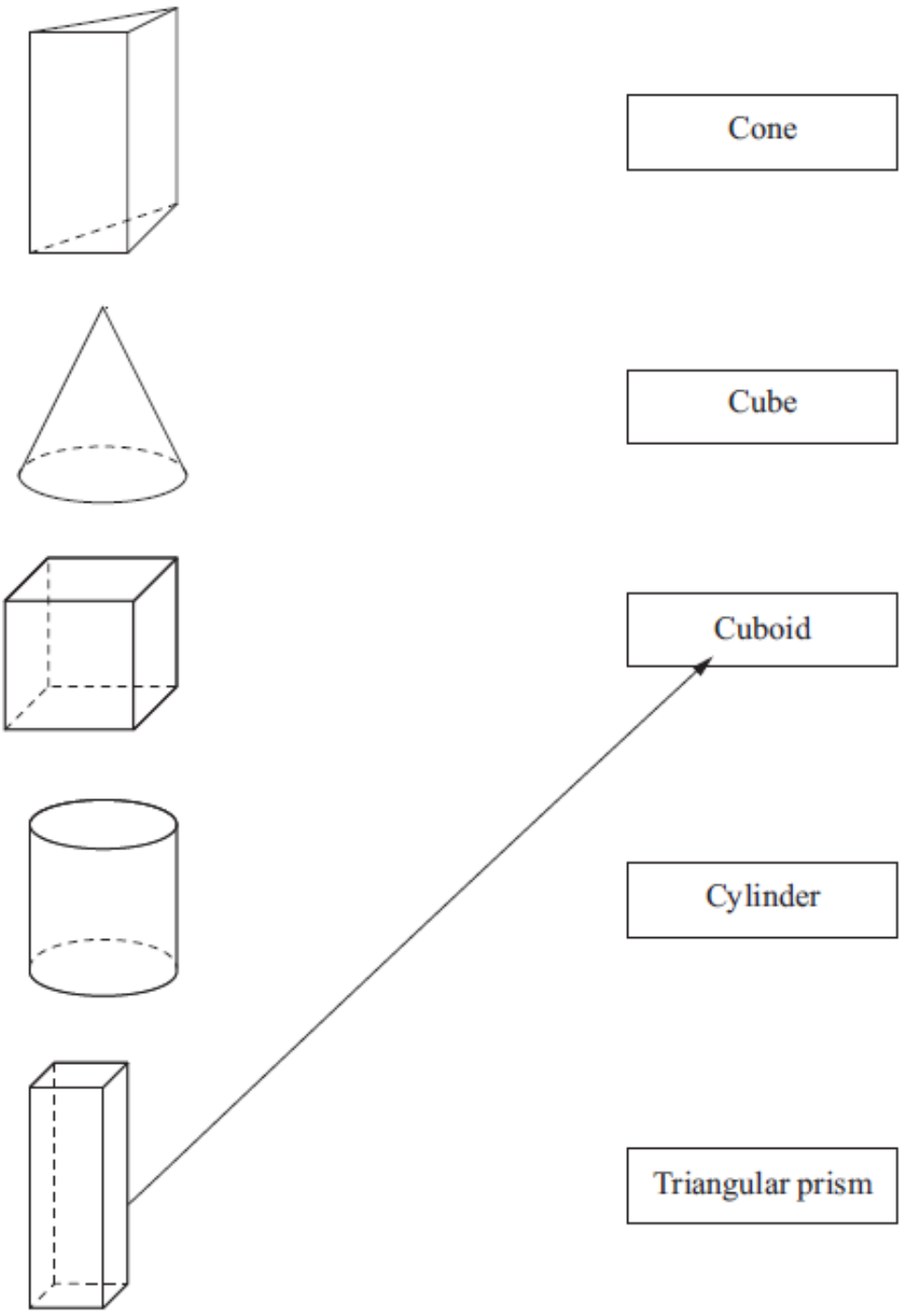
10. On the grid, show how this kite will tessellate.
You should draw at least 8 kites.



(3 marks)

11. Here are 5 solid shapes.

(a) Match each solid shape to its name.
One has been done for you.



(3)

(b) How many faces does the cuboid have?

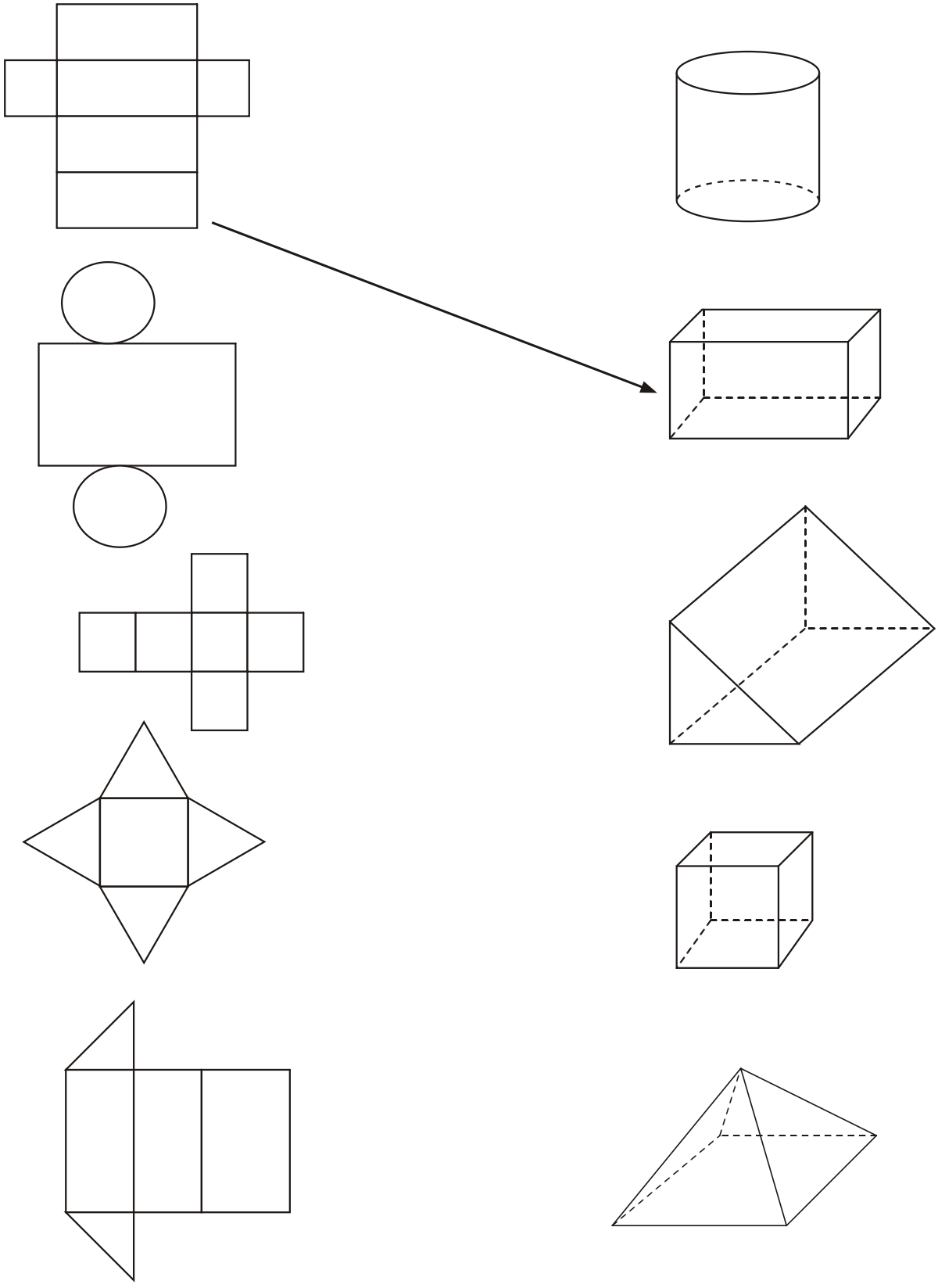
.....

(1)

(4 marks)

12. The diagram shows some nets and some solid shapes.
An arrow has been drawn from one net to its solid shape.

Draw an arrow from each of the other nets to its solid shape.



(3 marks)

20 Edexcel GCSE
Mathematics (Linear) – 1MA0

Mean, Median, Mode & Range

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions

Use black ink or ball-point pen.
Fill in the boxes at the top of this page with your name, centre number and candidate number.
Answer all questions.
Answer the questions in the spaces provided – there may be more space than you need.
Calculators may be used.

Information

The marks for each question are shown in brackets – use this as a guide as to how much time to spend on **each** question.
Questions labelled with an **asterisk** (*) are ones where the quality of your written communication will be assessed – you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.

Advice

Read each question carefully before you start to answer it.
Keep an eye on the time.
Try to answer every question.
Check your answers if you have time at the end.

1. Chloe made a list of her homework marks.

4 5 5 5 4 3 2 1 4 5

(a) Write down the mode of her homework marks.

……

(1)

(b) Work out her mean homework mark.

……

(2)

(Total 3 marks)

2. Peter rolled a 6-sided dice ten times.
Here are his scores.

3 2 4 6 3 3 4 2 5 4

(a) Work out the median of his scores.

.....

(2)

(b) Work out the mean of his scores.

.....

(2)

(c) Work out the range of his scores.

.....

(1)

(Total 5 marks)

3. Here are the weights, in kg, of 8 people.

63 65 65 70 72 86 90 97

(a) Write down the mode of the 8 weights.

..... kg

(1)

(b) Work out the range of the weights.

..... kg

(2)

(Total 3 marks)

4. Here are the ages of 6 people.

5 18 10 14 22 12

(a) Work out the range of these ages.

.....

(1)

(b) Find the median age.

.....

(2)

(c) Work out the mean age.

.....

(2)

(Total 5 marks)

5. Here are the shoe sizes of 6 students.

2 10 7 6 10 9

(a) Work out the range of these shoe sizes.

.....

(1)

(b) Find the median shoe sizes.

.....

(2)

(c) Work out the mean shoe sizes.

.....

(2)

(Total 5 marks)

6. Jalin wrote down the ages, in years, of seven of his relatives.

45, 38, 43, 43, 39, 40, 39

(a) Find the median age.

.....

(1)

(b) Work out the range of the ages.

.....

(1)

(c) Work out the mean age.

.....

(2)

(Total 4 marks)

7. Mr Smith kept a record of the number of absences for each student in his class for one term.

Here are his results.

0 0 0 8 4 5 5 3 2 1

(a) Write down the mode.

……...

(1)

(b) Work out the mean.

……...

(2)

(Total 3 marks)

8. Here are 10 numbers.

3 2 5 4 2 4 6 2 1 2

(a) Find the mode of these numbers.

.....

(1)

(b) Find the median of these numbers.

.....

(2)

(c) Find the range of these numbers.

.....

(2)

(Total 5 mark)

9. Here are the test marks of 6 girls and 4 boys.

Girls: 5 3 10 2 7 3

Boys: 2 5 9 3

(a) Write down the mode of the 10 marks.

……

(1)

(b) Work out the median mark of the **boys**.

……

(2)

(c) Work out the range of the **girls'** marks.

……

(1)

(d) Work out the mean mark of all 10 students.

……

(2)

(Total 6 marks)

10. Here are ten numbers.

7 6 8 4 5 9 7 3 6 7

(a) Work out the range.

.....

(2)

(b) Work out the mean.

.....

(2)

(Total 4 marks)

11. Here are fifteen numbers.

10	12	13	15	15
17	19	20	20	20
21	25	25	25	25

(a) Find the mode.

.....

(1)

(b) Find the median.

.....

(1)

(c) Work out the range.

.....

(2)

(Total 4 marks)

12. A rugby team played 7 games.

Here is the number of points they scored in each game.

3 5 8 9 12 12 16

(a) Find the median.

.....

(2)

The rugby team played another game.
They scored 11 points.

(b) Find the median number of points scored in these 8 games.

.....

(3)

(Total 5 marks)

13. Tom recorded the shoe size of five of his friends.
Here are his results.

8 9 3 4 7

(a) Work out the median shoe size.

.....

(2)

Another friend has a shoe size of 8

(b) Work out the median shoe size of all **six** friends of Tom.

.....

(2)
(Total 4 marks)

14. The mean of eight numbers is 41
The mean of two of the numbers is 29

What is the mean of the other six numbers?

.....

(Total 3 marks)