

# GCSE Mathematics

## Non Calculator

### Foundation Tier

## Free Practice Set 6

1 hour 30 minutes



## ANSWERS

Marks shown in brackets for each question (2)

Typical Grade Boundaries

C	D	E	F	G
76	60	47	33	20

### Legend used in answers

**Green** Box - Working out

5b means five times b  
 $b = -3$  so  $5 \times -3 = -15$

**Red** Box and ✓ - Answer

48 % ✓

### Authors Note

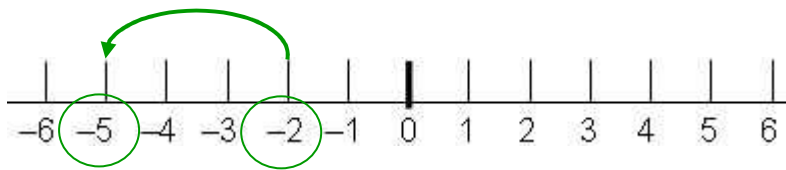
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1. Use the number line to work out the following

a)  $-2 - 3 =$



Start at  $-2$  and then jump 3 places negative to the left gives  $-5$

$-5$  ✓

(1)

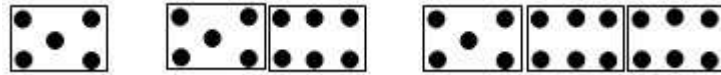
b)  $4 - 5 + 2 =$

We could rewrite this as  $4 + 2 - 5$  which is  $6 - 5 = 1$

$1$  ✓

(1)

2. Some dominos are arranged into three parts of a pattern as shown.



Count the faces in each pattern:

Pattern:	1	2	3	4	5
	5	11	17	?	?

It is going up by adding 6 to the last part each time.

So the 4<sup>th</sup> part =  $17 + 6 = 23$  and the 5<sup>th</sup> part is  $23 + 6 = 29$

- a) How many faces will be in the fourth and fifth part?

4<sup>th</sup> ..... **23** ✓ ..... 5<sup>th</sup> ..... **29** ✓ .....  
(2)

- b) What is the expression in terms of  $n$ , for the total in pattern number  $n$ ?

Since the pattern goes up in steps of 6 it's just like the 6 times table

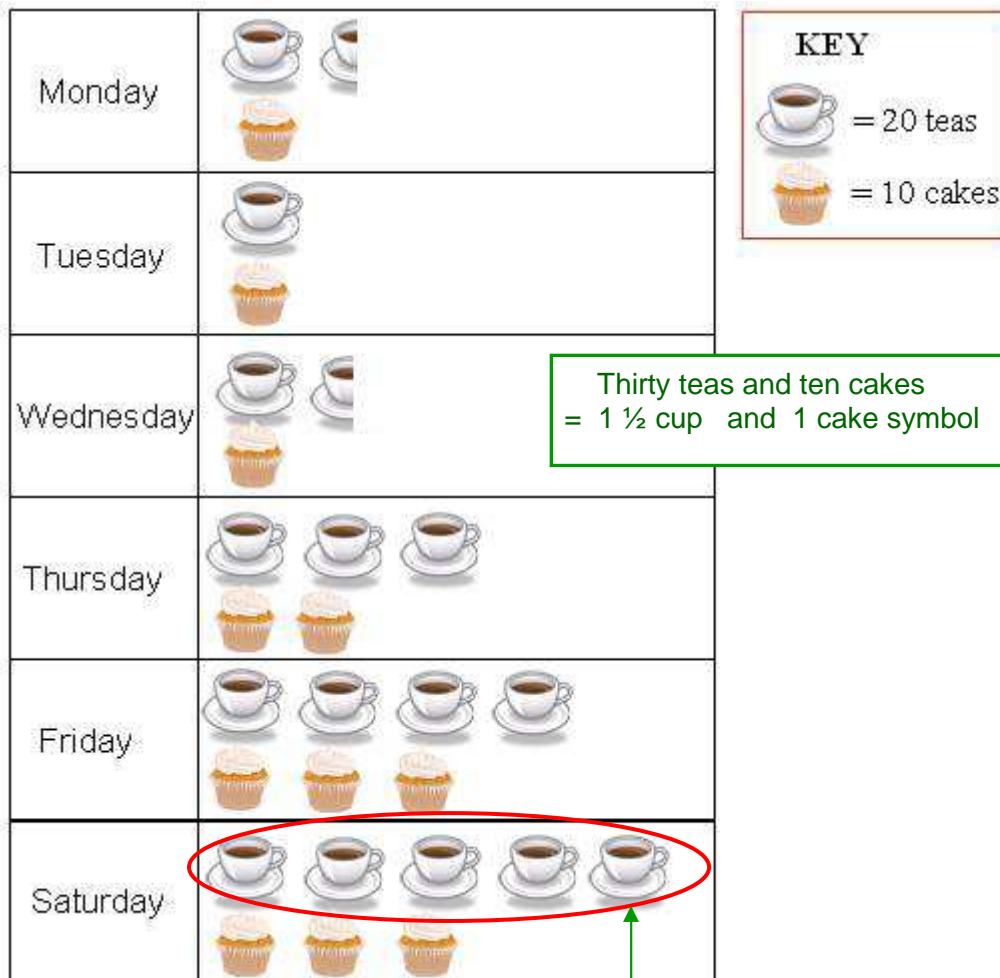
6	12	18	24	30	we can write this as $6 \times n$ or $6n$
---	----	----	----	----	---

But our pattern starts at 5 instead of 6 so we have to subtract 1 to every number

5	11	17	23	29	we can write this as $6n - 1$
---	----	----	----	----	-------------------------------

.....  **$6n - 1$**  ✓ .....  
(2)

3. The pictogram shows how many cups of tea and cakes were sold in a tea shop in a week.



a) How many teas were sold on Saturday?

There are 5 teacup symbols on Saturday.  
 Each teacup = 20 teas  
 In total we have  $5 \times 20 = 100$  teas

**100** ✓

..... (1)

Thirty teas and ten cakes were sold on Wednesday.

b) Complete the pictogram.

(1)

c) How many cakes were sold in the tea shop in the week?

There are 11 cake symbols in the week.  
 Each cake symbol = 10 cakes  
 In total we have  $11 \times 10 = 110$  cakes

..... **110** ✓ (1)

d) How many teas were sold in the tea shop in the week?

There are 16 teacup symbols in the week.  
 Each teacup symbol = 20 teas  
 In total we have  $16 \times 20 = 320$  teas

..... **320** ✓ (1)

4. Tiles are packed in boxes.

Each box has **25 tiles**.

There are **73 boxes**.

How many tiles are there in total?

Separate thousands, hundreds, tens and units with dotted lines. We have added 1000's in case we need it later

1000s, 100s, 10s, 1s

Multiply 73 by the 2 first

$$\begin{array}{r} 73 \\ \times 25 \\ \hline \end{array}$$

Since the 2 is really thirty write a zero in the units

$$\begin{array}{r} 73 \\ \times 25 \\ \hline \phantom{0} \end{array}$$

Now do  $2 \times 3 = 6$ . Write to left of zero in tens

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 60 \end{array}$$

Now do  $2 \times 7 = 14$ . Put the 4 in the hundreds but carry the 1 into the next column

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 1460 \end{array}$$

Put the 1 in the next column

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 1460 \\ 1 \phantom{000} \end{array}$$

Draw a dotted line under the 1460

Multiply 73 by the 5 next

1000s, 100s, 10s, 1s

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 1460 \end{array}$$

$5 \times 3$  is 15. Write the 5 in the units BUT carry the 1 to the tens

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 1460 \\ 15 \phantom{00} \end{array}$$

Now do  $5 \times 7 = 35$ . Add the 1 you carried  $35 + 1 = 36$ . Put 6 in the tens Carry the 3 to the next column

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 1460 \\ 365 \phantom{0} \end{array}$$

Put the 3 in the next column

$$\begin{array}{r} 73 \\ \times 25 \\ \hline 1460 \\ 365 \phantom{0} \\ 3 \phantom{000} \end{array}$$

Now add the two numbers

$$\begin{array}{r} 1460 \\ 365 \\ \hline 1825 \end{array}$$

**1825** ✓

(2)

5. Write these numbers in order of size.  
Start with the largest positive number.

a) 0.81 0.88 0.09 0.99 0.1

Look at numbers after the decimal points to put them in order. Ignore 0's at front

81  
88  
09  
99  
10

0.81  
0.88  
0.09  
0.99  
0.10

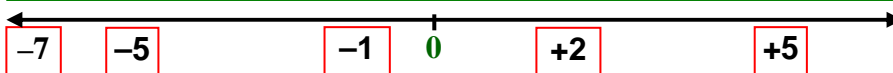
Write the decimals as shown.  
It makes it easy to compare

0.99, 0.88, 0.81, 0.10, 0.09

(1)

b) -5 5 2 -7 -1

Place the numbers either side of the zero point. The larger the negative or positive number is, the further away it is from the zero



5, 2, -1, -5, -7

(1)

c) 70% 0.72 3/5 3/4

To compare these values we need to convert them all to the same type of value.  
Make them into decimals.

70% = 0.70 (move decimal point 2 places to left)  
0.72 = 0.72  
3/5 = 6/10 (double top and bottom) = 0.60  
3/4 = 0.75 (you need to remember this one)

$\frac{3}{4}$  0.72, 70%, 3/5

(2)

6. From the list of numbers below:

12	15	30	39	81
----	----	----	----	----

a) What is the highest common factor?

The HCF is the largest number that will go into (divide into) all these numbers. Look at the smallest number 12, and find all the numbers that go into it: 2, 3, 4, 6 and 12. Look at these from the largest and see if it goes into the other numbers. 12, 6, or 4 won't go into 15 so we can't use that. 3 goes into 15 =  $5 \times 3$ ; into 30 =  $10 \times 3$ , into 39 =  $3 \times 13$  and into 81 =  $3 \times 27$ . So 3 is the highest common factor

3 ✓

(1)

b) Which one is a square number?

A square number is result of a number multiplied by itself  
 $9 \times 9 = 81$  so 81 is a square number

81 ✓

(1)

c) Which one is a multiple of 13?

A multiple of 13 means the 13 times table:  
 $1 \times 13 = 13$   
 $2 \times 13 = 26$   
 $3 \times 13 = 39$   
In our list we have 39 which is  $3 \times 13$

39 ✓

(1)

d) Write down two prime numbers between 30 and 39

A prime number is a number that only 1 or itself will divide into. Write down the numbers between 30 and 39. Look for numbers that can be divided.

31   ~~32~~   ~~33~~   ~~34~~   ~~35~~   ~~36~~   37   ~~38~~

3 or 11 goes into 33   These are even and will divide by 2   5 goes into 35

This leaves 31 and 37 as prime numbers

31, 37 ✓

(1)

7. A space rocket weighs 1,320,500 pounds (lb) at launch.



a) What is 1,320,500 in words?

The commas help to read a number.

<b>Millions</b> ,	<b>thousands</b> ,	<b>hundreds,</b>	<b>tens,</b>	<b>ones</b>
One million	three hundred and twenty thousand	five hundred		

**One million, three hundred and twenty thousand, five hundred**

(1)

b) What is 1,320,500 correct to the nearest thousand.

We have to decide whether we are nearer 1, 320, 000 or 1, 321, 000

To do this we look at the hundreds number which is 5.

You always round UP when you have a 5 so we have 1, 321, 000

**1, 321, 000**

(1)

c) The rocket has a diameter of 3.77 m. What is this to the *nearest* metre?

We have to decide whether we are nearer 3m or 4 m

3.77 is closer to 4m than 3 m

**4**

(1)

d) The space shuttle reaches a height of 28 miles after 2 minutes.  
Calculate its average speed in miles per hour.

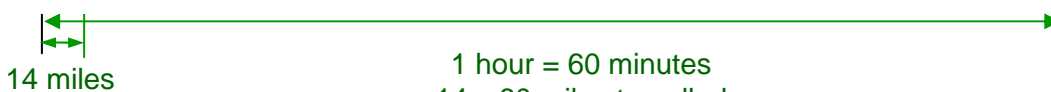
If we travel 28 miles in 2 minutes , we travel 14 miles in 1 minute

There are 60 minutes in an hour. So in 1 hour we travel 14 x 60 miles

14 x 10 = 140. So we have 140 x 6 = 840

Or 140 + 140 + 140 + 140 + 140 + 140 = 840.

1 minute



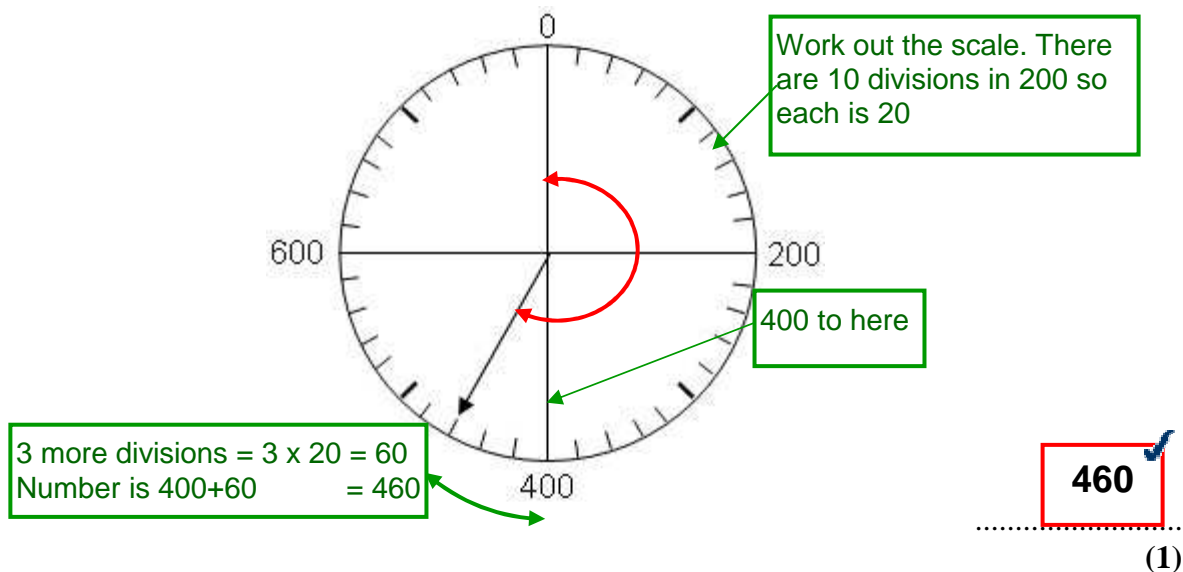
**840**

mph

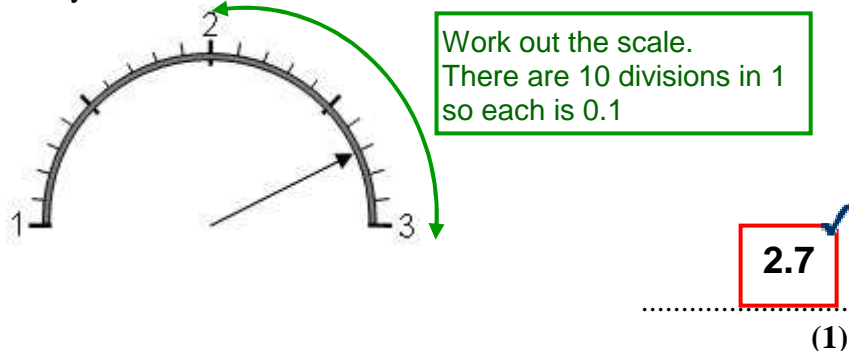
(2)



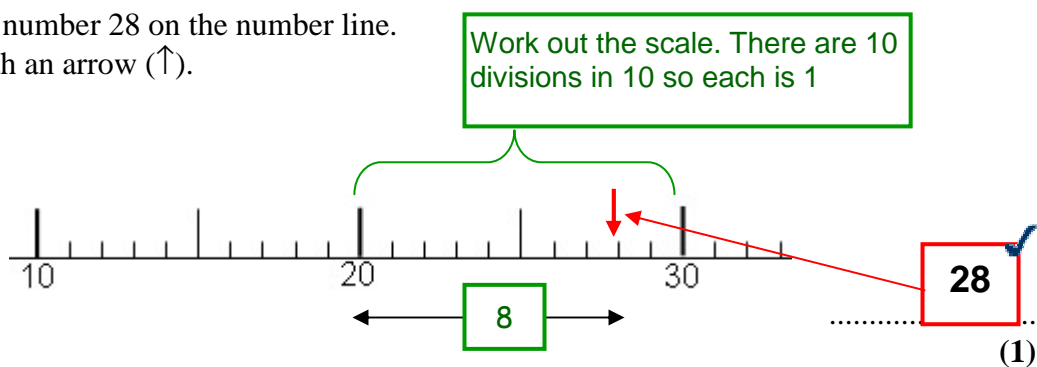
8. a) What is the number shown by the arrow.



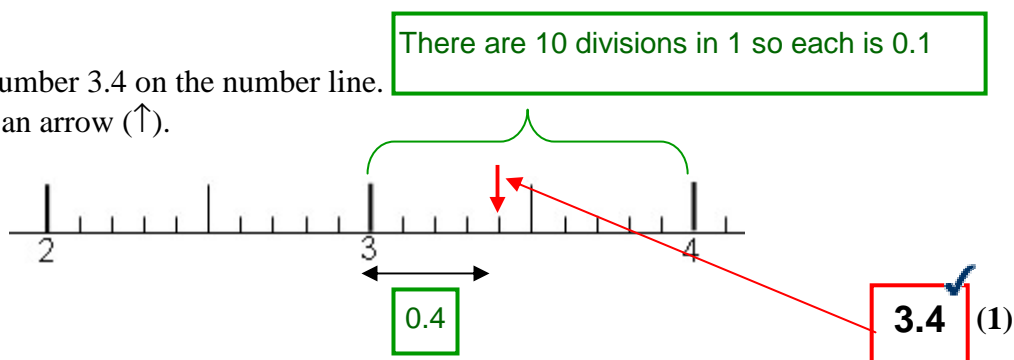
b) What is the number shown by the arrow?



c) Find the number 28 on the number line. Mark it with an arrow (↑).



d) Find the number 3.4 on the number line. Mark it with an arrow (↑).



9. Find the values of  $x$

Think of an equation as two sides of a balance.  
Whatever you do to one side do the same to the other side to keep the balance

a)  $5x - 7 = 18$

Get rid of the 7 on the left side by adding 7 to both sides

$$5x - 7 + 7 = 18 + 7 \text{ so } 5x = 25$$

Divide both sides by 5 so we only have  $x$  on the left.  $x = \frac{25}{5} = 5$

$x =$  .....

5 ✓

(2)

b)  $19 + 2x = 9$

Get rid of the 19 on the left side by subtracting 19 to both sides

$$19 - 19 + 2x = 9 - 19 \text{ so } 2x = -10$$

Divide both sides by 2 so we only have  $x$  on the left.  $x = \frac{-10}{2} = -5$

$x =$  .....

-5 ✓

(2)

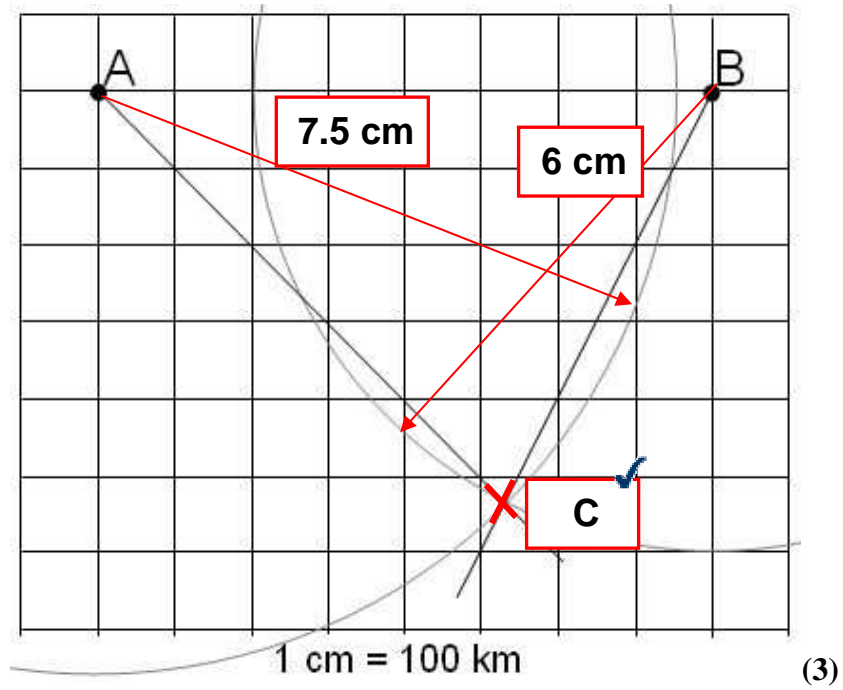
10. The map below shows two points A and B. The scale is 1 cm = 100 km.

Point C is further south and is 750 km from A and 600 km from B

750 km on a scale of 1 cm = 100 km is 7.5 cm  
600 km on a scale of 1 cm = 100 km is 6 cm

Use accurate construction to show point C on the map.

You **must** leave in your construction lines.



Use a compass and draw :  
a circle radius of 7.5 cm centre A  
a circle of radius 6cm centre B

They cross at point C

11. The table shows the average daytime winter temperature for days in a week.

Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Temperature	7	4	4	5	3.5	3	6

a) What is the median temperature?

**Median** is the middle value in a list of values after they have been ordered

Temperature	3	3.5	4	4	5	6	7
-------------	---	-----	---	---	---	---	---

There are 7 values so the median is the 4<sup>th</sup> one with 3 values each side

4 ✓

°C  
(2)

b) What is the mode temperature?

**Mode** is number that appears Most Often in the list of values.

4 ✓

°C  
(1)

c) What is the mean temperature from Monday to Wednesday?

**Mean** is the average – add the values and divide by how many there are.

$$(7 + 4 + 4) \div 3 = 15 \div 3 = 5$$

5 ✓

°C  
(1)

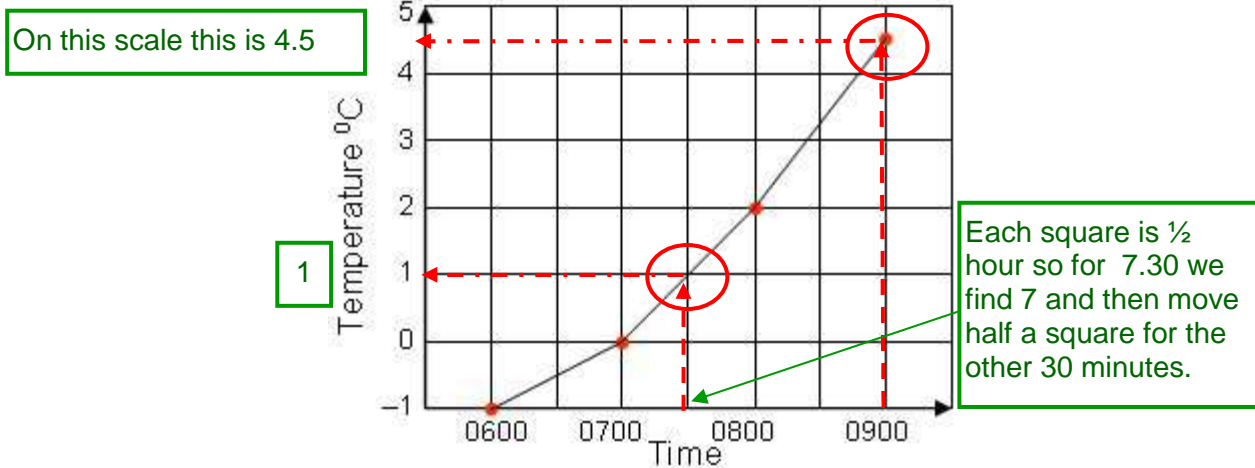
d) What is the difference between the temperature on Monday and Friday?

$$7 - 3.5 = 3.5 \text{ degrees difference.}$$

3.5 ✓

°C  
(1)

The temperature on winter's morning from 0600 to 0900 is shown below.



- e) What was the temperature at 0900?

..... **4.5** °C  
(1)

- f) What was the temperature at 07.30?

..... **1** °C  
(1)

12. There are **25 pupils** in a class. You will use this information later

The table shows information about KS3 test results in maths and science.

		Maths			
		Level 5	Level 6	Level 7	Level 8
Science	Level 5	3	2	2	0
	Level 6	2	5	2	0
	Level 7	0	3	4	2

a) How many pupils had the **same level** in both maths and science?

Those with the same levels are shown above.  
In total :  $3 + 5 + 4 = 12$

12

(1)

b) What **percentage** of the class achieved level 7 in maths?

The level 7 maths column shows how many achieved this.  
 $2 + 2 + 4 = 8$  achieved level 7 in maths out of 25

$$\frac{8}{25} = \frac{32}{100} = 32\% \quad (\text{we multiply 25 by 4 to turn into a \%})$$

32%

(2)

c) What **fraction** of the class achieved level 6 in maths AND science  
Give your answer in its lowest terms.

5 achieved level 6 in maths and science out of 25

$$\frac{5}{25} = \frac{1}{5} \quad (\text{we cancelled top and bottom by 5})$$

$\frac{1}{5}$

(1)

d) If one pupil was selected randomly from the class, what is the **probability** that they achieved **level 7 or above** in maths.  
Give your answer in its lowest terms.

Add up the two last columns

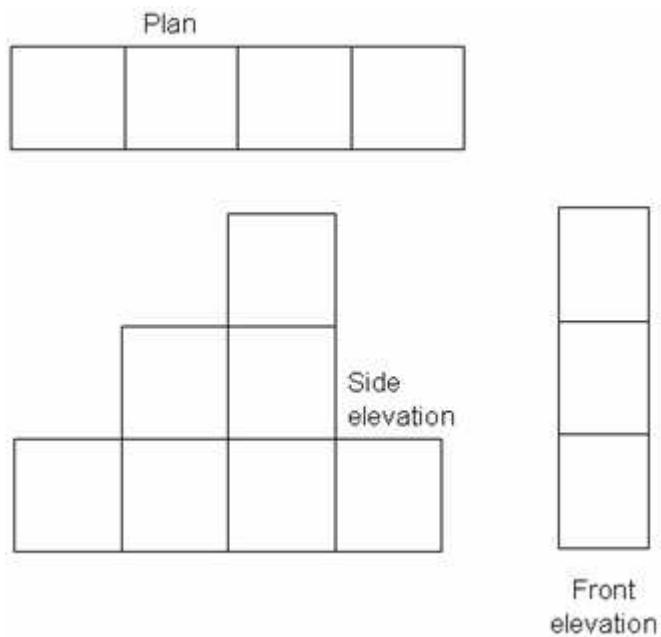
8 achieved level 7 in maths and 2 got level 8 out of 25

$$\frac{10}{25} = \frac{2}{5} \quad (\text{we cancelled top and bottom by 5})$$

$\frac{2}{5}$

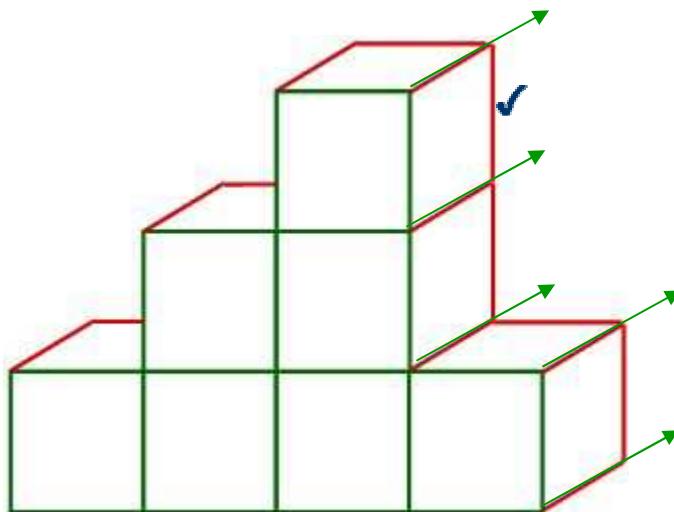
(2)

13. The plan, front elevation and side elevation of a 3-D shape are shown below.



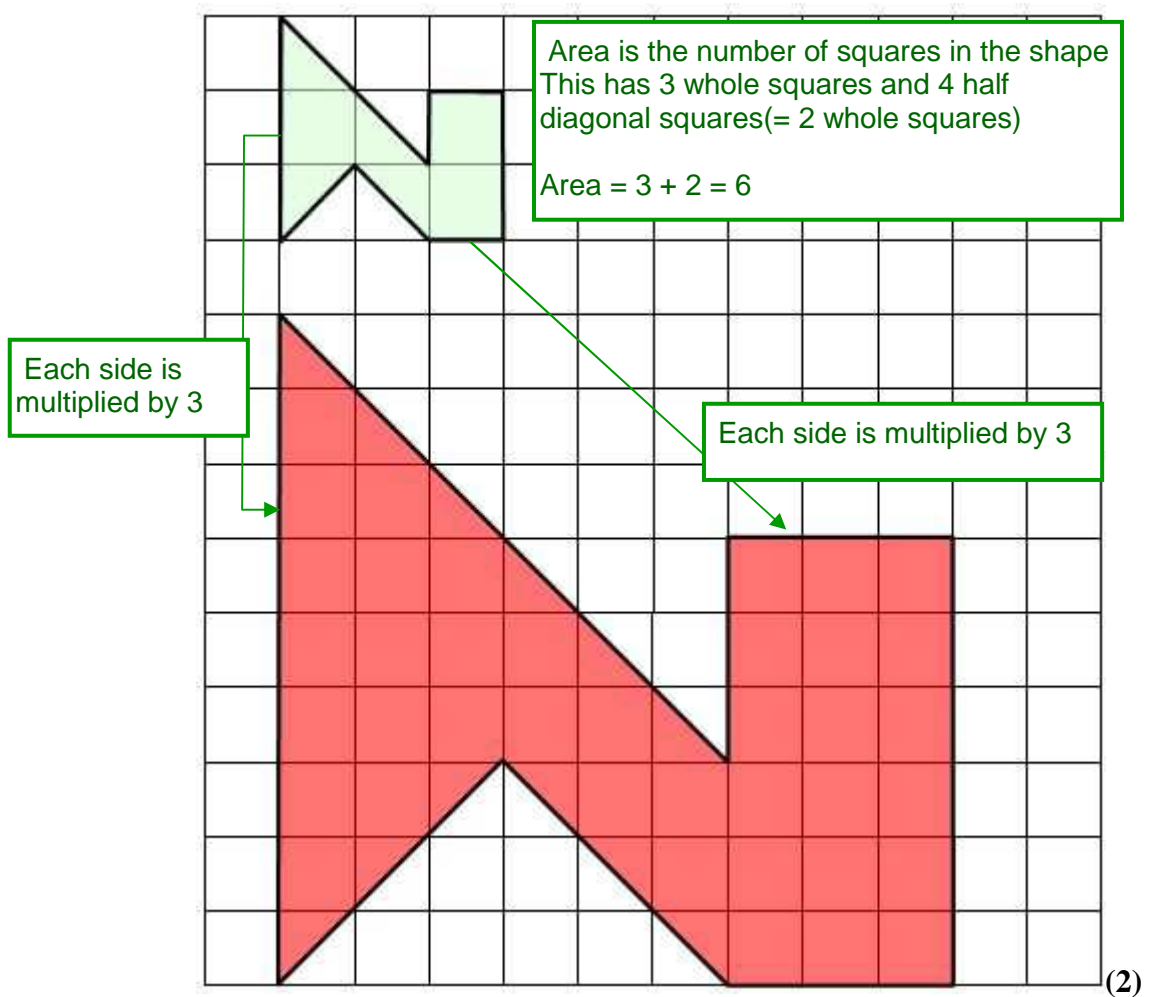
Draw a picture of the 3-D shape

Start with the side elevation  
Draw angled lines as shown below  
Then horizontal and vertical lines.



(2)

14. a) Enlarge the shape shown on the grid below by a scale factor of 3



- b) What is the *AREA* of the enlarged shade you have drawn?

You can count up the squares of the enlarged shape or count up the squares of the original shape and multiply by 3 x 3

Area of original = 5, so enlarged shape has area of  $5 \times 3 \times 3 = 5 \times 9 = 45$

45 ✓

(2)



15. Stuart planted some vegetable seeds.  
The table shows in which months the vegetables were ready to harvest.

		Month			
		July	August	Sept	Oct
Type of bulb	Beetroot	✓	✓	✓	✓
	Broccoli		✓	✓	
	Sprouts				✓
	Carrots	✓	✓	✓	✓
	Runner Bean			✓	

Ticks in this column means these vegetables are ready in July i.e. Beetroot & carrots

If Stuart puts one of each type of seed in a bag and took out a seed without looking.

- a) Write down the probability that he will take a carrot seed.

$$\text{Probability} = \frac{\text{number carrot seeds}}{\text{total number seeds}} = \frac{1}{5}$$

$$\frac{1}{5}$$

(1)

- b) What is the probability that it he will NOT take a carrot seed?

$$\text{Probability of taking seed} + \text{probability not taking seed} = 1$$

$$\frac{1}{5} + ? = 1$$

$$\frac{4}{5}$$

(1)

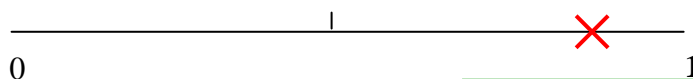
- c) What is the probability that he will take a seed that is ready to harvest in **July**?

There are 2 seeds ready to harvest in July  
Probability =  $\frac{2}{5}$

$$\frac{2}{5}$$

(1)

- d) On the probability scale, mark with a cross (×) the probability that he will take a seed that is ready to harvest in **September**.

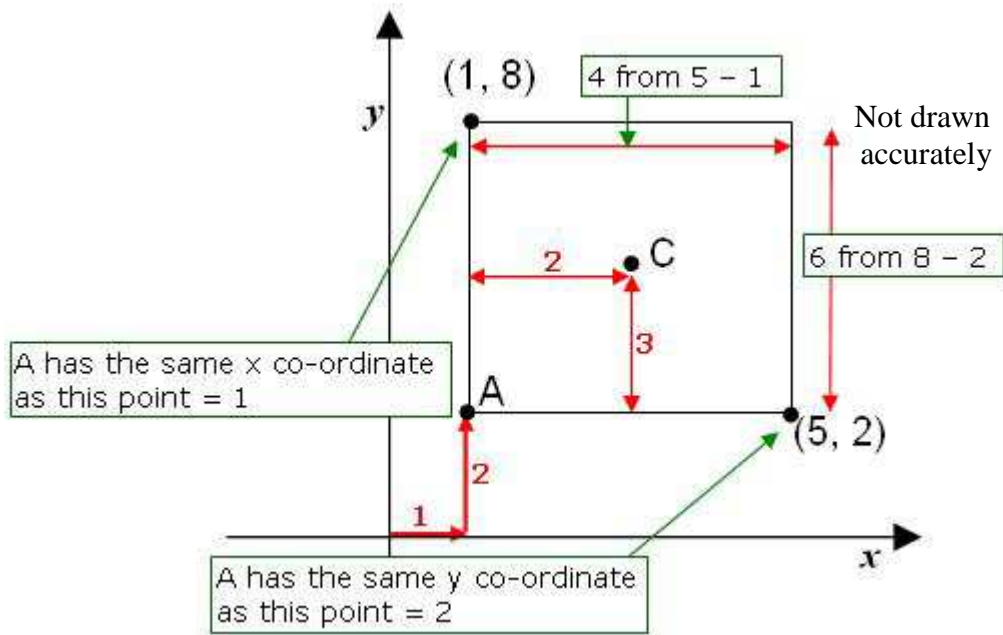


There are 4 seeds ready to harvest in September. Probability =  $\frac{4}{5}$

4/5 or 0.8

(1)

16. A rectangle is drawn on an x-y axis below with co-ordinates for opposite corners.



What are the coordinates of point A?

A co-ordinate is two numbers which tell you firstly how far to move horizontally and then how far to move vertically.  
Work out the co-ordinates of A using the other given co-ordinates in the rectangle.

A is ( 1 , 2 ) (1)

Point C is halfway between the sides of the rectangle

What are the coordinates of point C?

Work out the width and height of the rectangle = 4 wide, 6 high  
Divide these by two to find the distance of C from the sides = 2 , 3  
Add these to the co-ordinates of point A = 1 + 2 , 2 + 3 = 3 , 5

C is ( 3 , 5 ) (1)

17. a) What is 25 kilometres in metres

1 kilometre = 1000m  
25 x 1000  
To multiply by 1000 move the decimal point 3 place to the right = 25.000  $\rightarrow$  25,000.

25,000

.m  
(1)

- b) What is 2.5 metres in centimetres?

1 metre = 100cm  
2.5 x 100.  
To multiply by 100 move the decimal point 2 place to the right = 2.50  $\rightarrow$  250.

250

.cm  
(1)

- c) What is  $\frac{1}{4}$  kilogram in grams?

1 kilogram = 1000gm A  $\frac{1}{4}$  is 0.25  
 $\frac{1}{4}$  kilogram = 0.25 x 1000  
To multiply by 1000 move the decimal point 3 place to the right = 0.250  $\rightarrow$  250

250

.grams  
(1)

- d) What is 2.862 grams correct to 1 decimal place?

1 decimal place means we can only have one number after the decimal point

Is 2.862 closer to 2.8 or 2.9?  
Look at the 2<sup>nd</sup> decimal place – if it is 5 or more go up  
So it's 2.9

2.9

.grams  
(1)

18.

**Simplify** means collect all the things that are the same together.  
The sign before each term is for that term only

a) Simplify  $10x + q - 6x - 3q$

$10x - 6x = 4x$        $q - 3q = -2q$

$4x - 2q$  ✓

(1)

b) Simplify  $5s + 7y - 6s - 6y$

$5s - 6s + 7y - 6y = -s + y$

$-s + y$  ✓

(1)

The sign only goes with the term in front of it

c) Simplify  $6x^2 - 5x^2$

You have 6 lots of  $x^2$  and take five away so we have one lot

$x^2$  ✓

(1)

d) Expand and simplify:

$3(x + y) + 4(3x - 2y)$

Expand means multiply out the brackets:

$3(x + y) = 3x + 3y$

$4(3x - 2y) = 12x - 8y$

Simplify by putting same types together

$3x + 12x + 3y - 8y = 15x - 5y$

$15x - 5y$  ✓

(2)

e) Make b the subject of the formula

$$a = 4b + 3c$$

We have to get b on one side of the equation and everything else on the other side.

Imagine that each side is different sides of a balance separated by the = sign.

To keep it balanced if we change one side we have to change the other side in exact in the same way.

Imagine the values on a pair of scales which are in balance.

To get just  $4b$  on the right take  $3c$  off the scales.

When we take  $3c$  off the right side the scale becomes unbalanced.

Imagine that we can take off  $3c$  from the left side to rebalance the scale.

If we divide the right by 4 it will leave us with just  $b$ . Do the same to the left side and it stays balanced.

Now  $b$  is the subject of the formula

Subtract  $3c$  from both sides

$$a - 3c = 4b + 3c - 3c$$
$$a - 3c = 4b$$

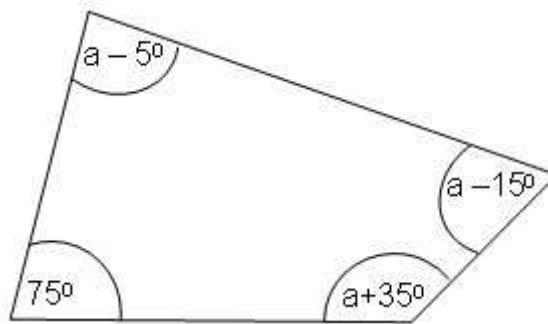
Divide both sides by 4

$$\frac{a - 3c}{4}$$

$$\frac{a - 3c}{4}$$

(2)

- f) Four angles are shown in the quadrilateral below.



Write an equation for the total angles in the quadrilateral in terms of  $a$ .

All the angles in a quadrilateral add up to 360 degrees.

$$(a - 5) + 75 + (a - 15) + (a + 35) = 360$$

Add up the  $a$ 's and the numbers

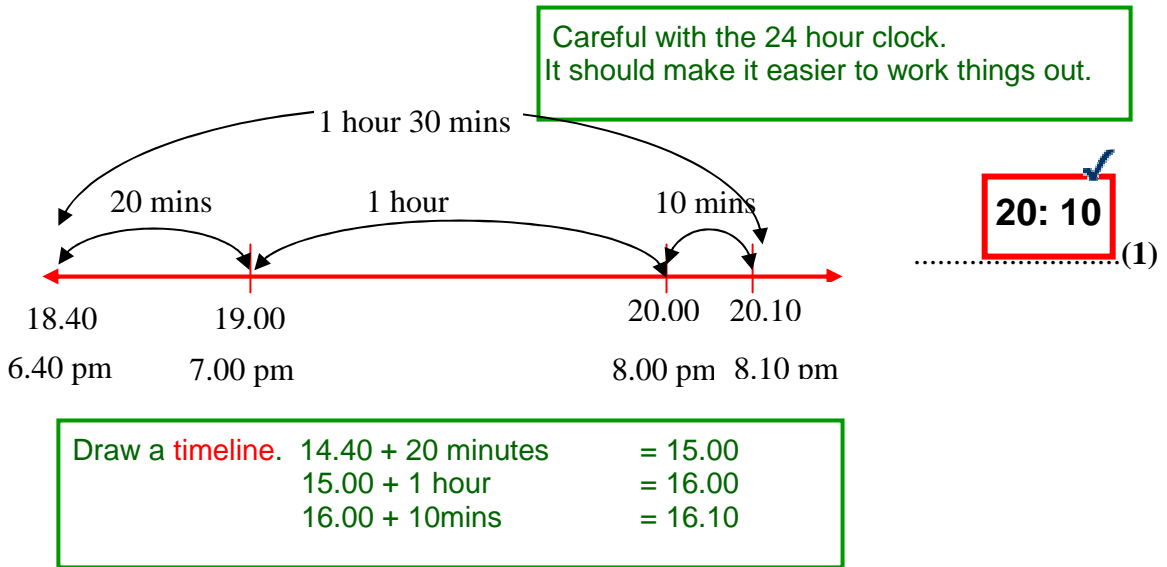
$$3a + 70 + 20 = 3a + 90 = 360$$

$$3a + 90 = 360$$

(2)

19. Laura took the train to see her mother.  
 The timetable said the train should arrive at 18: 40  
 But it was delayed and arrived 1 hour 30 minutes later than expected.

a) At what time did her train arrive? Give your answer in terms of the 24 hour clock



The train company gave its customers some compensation for the delays. The compensation was worked out using the rule below

Calculate 20% of the amount spent

Then round this **up** to the next whole number of pounds

Laura spent £14.80

b) i) What is 20% of £14.80

10% of £14.80 = £1.48  
 10% of £14.80 = £1.48  
 $\therefore 20\% \text{ of } £14.80 = £2.96$

10% is a tenth which means divide by 10.  
 Do this by moving the decimal point to the left one place

£ 2.96 ✓

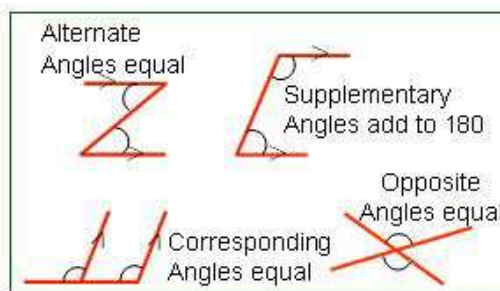
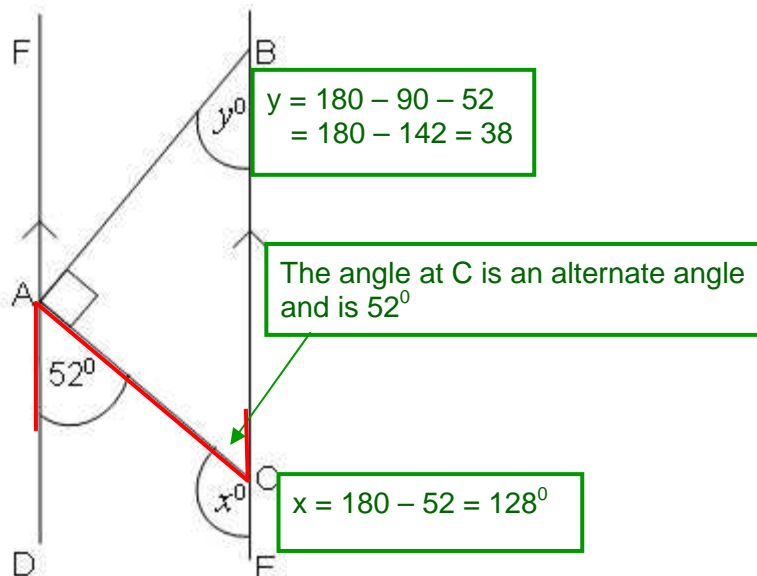
ii) Round this up to the next whole number of pounds.

**Round up** means go to the next highest pound  
 So £2.96 becomes £3.00

£ 3 ✓

(3)

20. The diagram shows two parallel lines DF and EB and a triangle ABC.



Work out the sizes of angles  $x$  and  $y$

Find  $x$  by finding the angle at C. Then subtract this from 180

$x = \boxed{128}^\circ$   
(1)

Explain how you got your answer

**The angle at C is alternate = 52**  
 **$x$  is on a straight line of 180 so is  $180 - 52 = 128$**

.....  
(1)

Find  $y$  by subtracting a right angle (90) and the angle at C (52) from the total angles in a triangle (180)

$y = \boxed{38}^\circ$   
(1)



21. Work out:

Follow the rules of BODMAS or BIDMAS  
This tell you the order which you do calculate

Brackets Order Divide Multiply Add Subtract  
Brackets Indices Divide Multiply Add Subtract

a)

$$3 \times 5 - 1$$

Do the **M**ultiplication first

$$\begin{array}{l} 1^{\text{st}} \quad 3 \times 5 \quad = 15 \\ 2^{\text{nd}} \quad 15 - 1 \quad = 14 \end{array}$$

38 ✓

(1)

b)

$$3 - 5 \times 1$$

Do the **M**ultiplication first

$$\begin{array}{l} 1^{\text{st}} \quad 5 \times 1 \quad = 5 \\ 2^{\text{nd}} \quad 3 - 5 \quad = -2 \end{array}$$

-2 ✓

(1)

c)

$$-3 \times (5 - 1)$$

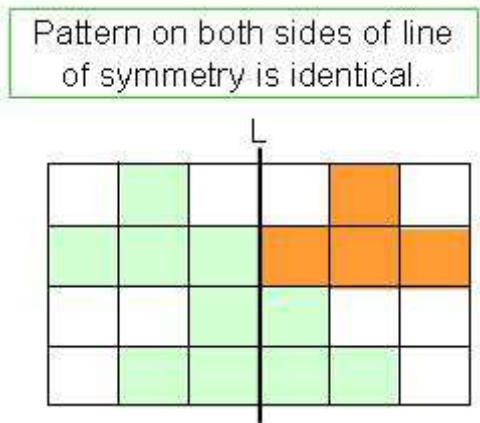
Do the calculation in **B**rackets first

$$\begin{array}{l} 1^{\text{st}} \quad (5 - 1) \quad = 4 \\ 2^{\text{nd}} \quad -3 \times 4 \quad = -12 \end{array}$$

-12 ✓

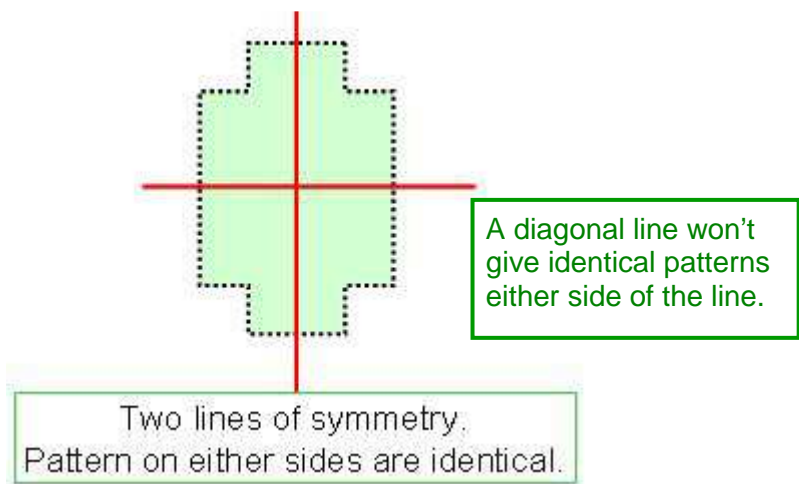
(1)

22. Look at the squares that been shaded on the grid below.



a) Complete the shading to make a shape with a line of symmetry L shown.

(1)

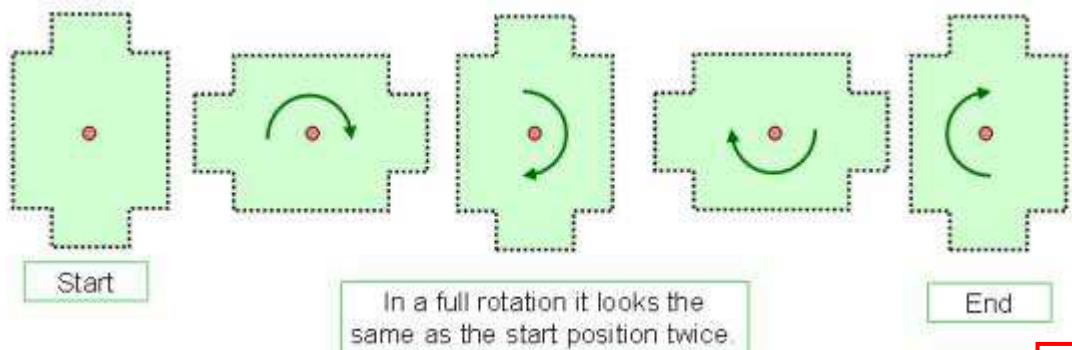


b) Draw **all** the lines of symmetry on the shape above. How many are there?

2 ✓

(1)

c) What is the rotational symmetry for the shape above?



2 ✓

(1)

23. A mobile phone cost £120 *excluding* VAT.  
VAT on the mobile phone is 15 %

a) How much does the mobile phone cost *including* VAT?

$$15\% = 10\% + 5\%.$$

$$10\% \text{ of } £120 = £12 \quad (120 \div 10 = 12)$$

$$5\% \text{ of } £120 = £6 \quad (\text{half of above})$$

$$\therefore 15\% \text{ of } £120 = £12 + £6 = £18$$

$$\text{Add it to the } £120 \rightarrow £120 + £18 = £138$$

£..... **138** ✓

(2)

b) Text messages cost 8p each.  
In one month Sunita sent 150 text messages.  
Sunita gets 100 free text messages per month.  
How much did Sunita spend on text messages?

$$150 \text{ text} - 100 \text{ free} = 50 \text{ to pay for}$$

$$50 \times 8 \text{ pence is the same as } 100 \times 8 \div 2 = 800 \div 2 = 400 \text{ pence}$$

$$400 \text{ pence} = £4.00 \quad (\text{divide by } 100 \text{ to convert pence to pounds})$$

£..... **4** ✓

.....

(2)

c) Sunita sent 150 text messages to her friends Bill, Jack and Ram in the ratio 1 : 4 : 5

How much did she send to each person?

$$\text{Add up the ratios } 1 + 4 + 5 = 10. \text{ we have } 10 \text{ parts}$$

$$\text{Divide } 150 \text{ by } 10 = 15. \text{ One part} = 15$$

$$\text{Bill gets } 1 \times 15 = 15$$

$$\text{Jack gets } 4 \times 15 = 60$$

$$\text{Ram gets } 5 \times 15 = 75$$

**15** ✓

Bill .....

**60** ✓

Jack .....

**75** ✓

..... Ram .....

(2)

24. Kathleen is  $x$  years old.

Her daughter Jane is half Kathleen's age.

a) Write down an expression, in terms of  $x$ , for Jane's age.

An expression is something that contains numbers and letters.

Jane is half her mother's age =  $\frac{x}{2}$

$$\frac{x}{2}$$

(1)

The total age of both Kathleen and Jane is 63 years.

b) Write an equation for their total age in terms of  $x$ .

Kathleen is  $x$  years old.

Jane is  $\frac{x}{2}$  years old.

Since we know that these add up to 63, we can make an *equation*:

$$x + \frac{x}{2} = 63 \quad \text{so} \quad \frac{3x}{2} = 63$$

$$x + \frac{x}{2} = 63$$

(1)

c) Solve the equation you wrote above (b) to find  $x$  (Kathleen's age)

$$x + \frac{x}{2} = 63 \quad \text{so} \quad \frac{3x}{2} = 63$$

Multiply both sides by 2 gives  $3x = 63 \times 2$  so  $3x = 126$

Divide both sides by 3 gives  $\frac{3x}{3} = \frac{126}{3}$  so  $x = 42$

Kathleen is 42 her daughter Jane is 21

42

years

(2)

25. a) Work out  $1\frac{3}{5} + 2\frac{5}{7}$

Give your answer as a fraction in its simplest form.

Add the 1 and the 2 = 3 and put aside for now

Use this simple trick to add the fractions:

$\frac{3}{5} + \frac{5}{7}$  multiply as shown by the arrows. Red arrow gives base number

We get  $\frac{3}{5} + \frac{5}{7} = \frac{21}{35} + \frac{25}{35} = \frac{46}{35}$

This is  $1\frac{11}{35}$ . Add back the 3 to give  $4\frac{11}{35}$

What we have done is convert both fractions to the same denominator

$4\frac{11}{35}$

(2)

b) Work out  $\frac{3}{5} \times \frac{5}{7}$

Give your answer as a fraction in its simplest form

Now just multiply out top and bottom

$$\frac{3}{5} \times \frac{5}{7} = \frac{15}{35} = \frac{3}{7}$$

$\frac{3}{7}$

(2)

**TOTAL FOR PAPER: 100 MARKS**  
**END**