

First Name	
Last Name	
Date	
Total Marks	/ 100 marks

MathsMadeEasy

GCSE Mathematics
Non-Calculator
Foundation Tier
Free Practice Set 2-2
1 hour 30 minutes



Answers at:

<http://www.mathsmadeeasy.co.uk/gcsemathspapers-free.htm>

Instructions

Write your name and other details in the boxes above.
Answer all the questions
Take π to be 3.142

Information

Marks are shown in brackets for each question (2)
Calculators may not be used

Advice

Don't spend too long on one question
Show all your working in calculations for full marks
You will get marks for method even if your answer is incorrect
Leave a question until later if you cannot answer it

Materials needed for examination

Ruler marked in centimetres and millimetres,
protractor, compasses, pen, pencil, rubber
Tracing paper may be used

1. a) Draw a line of symmetry on the shape below.



(1)

- b) What is the order of rotational symmetry for the shape.

(1)

2. An oil tanker weighs 257 800 tons.

- a) What is 257 800 in words.

..... (1)

- b) What is 257 800 to the nearest thousand.

..... (1)

- c) The engines on the tanker needed 100 gallons of fuel every minute.
How many gallons would they use in an hour at this rate?

..... (1)

- d) The tanker travelled a distance of 234 miles in 9 hours.
What was its speed in miles per hour.

.....mph (2)

3. A number pattern is shown below.

Pattern number	Pattern	Total
1	$3 =$	3
2	$3 + 2 =$	5
3	$3 + 2 + 2 =$	7
4
5

a) Complete the table above. (2)

b) What is the expression in terms of n , for the total in pattern number n .

..... (2)

4. What is

a) $8.6 - 2.7$ (1)

b) $-5.3 - 1.7$ (1)

c) $4 + 5 \times 3$ (1)

d) $36 \div (3 \times 4)$ (1)

e) Arrange these numbers from *smallest to largest*.

-1 -0.9 -4 0.89 0.809

..... (1)

5. The tally chart below show how many cupcakes Laura sold in her cafe a week.

	Tally	Frequency
Monday		6
Tuesday	/// III	
Wednesday	/// ///	10
Thursday		12
Friday	/// /// ///	15
Saturday	/// /// /// II	

- a) Complete the tally and frequency columns. (2)

The pictogram shows the same information above.

	Cupcakes sold
Monday	
Tuesday	○ ○
Wednesday	○ ○ ◐
Thursday	○ ○ ○
Friday	
Saturday	○ ○ ○ ○ ◑

Key:

- b) Complete the pictogram and the key. (2)

6. a) Estimate:

$$14.1 \times 99$$

Show your working.

..... (1)

b) Estimate:

$$\frac{14.9 \times 40.1}{9.8 \times 4.9}$$

..... (2)

7. a) Change three kilometres into metres.

..... m (1)

b) Change two metres into millimetres.

..... mm (1)

c) Change 750 grams into kilograms.

..... kilograms (1)

d) What is 1.266 grams correct to 2 decimal places.

..... grams (1)

8. a) Complete the table below.

Fraction	%	Decimal
$\frac{3}{4}$
.....	90%
.....	0.2

(3)

- b) What is 16% as a *fraction*.
Give your answer in its simplest form.

..... (1)

- c) In a class of 25 pupils, 6 had green eyes.
What *percentage* of the class had green eyes.

.....% (1)

- d) Add one half of three quarters to one eighth

..... (2)

9. Sylvia is x years old.

Her husband Cyril is 3 years older.

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

..... (1)

The total age of both Sylvia and Cyril is 143 years.

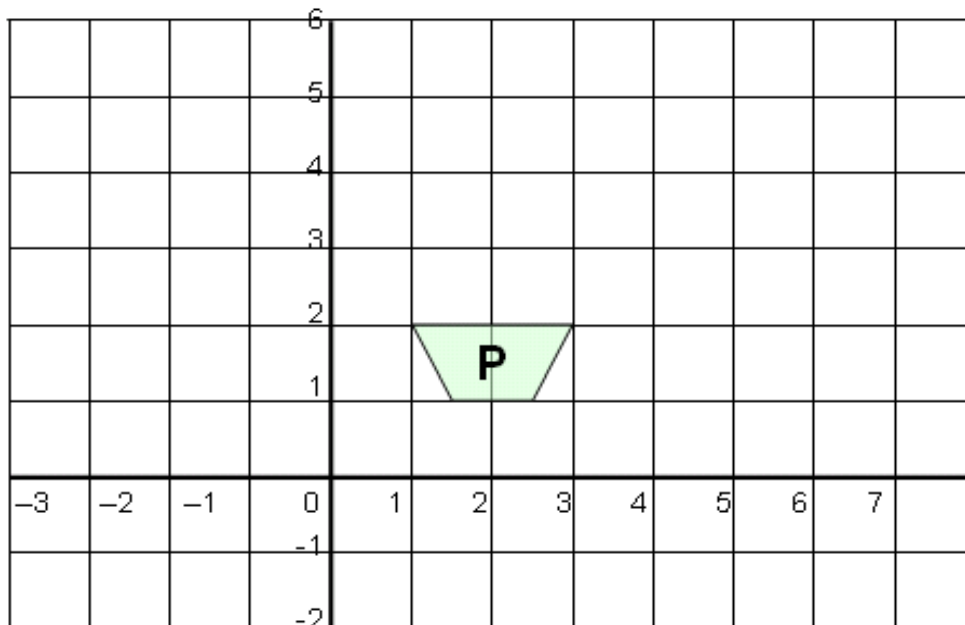
b) Write an equation and solve it to find the value of x (Sylvia's age).

..... (2)

10. A shape P is shown on the grid below.

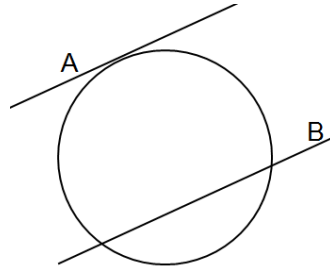
a) What is the name of the shape.

..... (1)



b) Enlarge shape **P** by scale factor 2, centre *O*. Label the new shape **Q**. (3)

11. A circle is shown below.



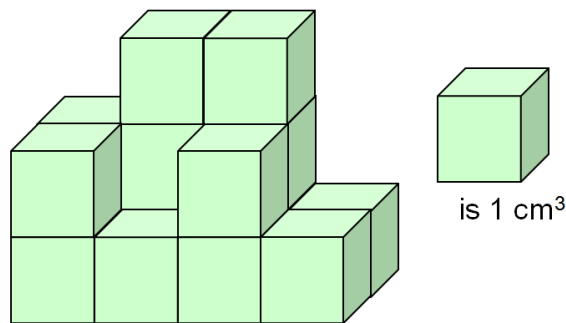
a) What is the name of line A.

..... (1)

b) What is the name of line B.

..... (1)

Several centimetre cubes have been stacked as shown.



c) What is the volume of the stack of cubes.

.....cm³ (1)

12. Work out 24.3×56

Show all your working

..... (3)

13. Here are the speeds, in miles per hour, of 17 cars near a school.

14 31 20 17 18 25 24 21 27 33
18 24 32 28 24 14 19

Draw an ordered stem and leaf diagram to show this information.
Include a key.



Key

(3)

14. Given that

$$345 \times 62 = 21390$$

find the value of

a) 34.5×6.2

..... (1)

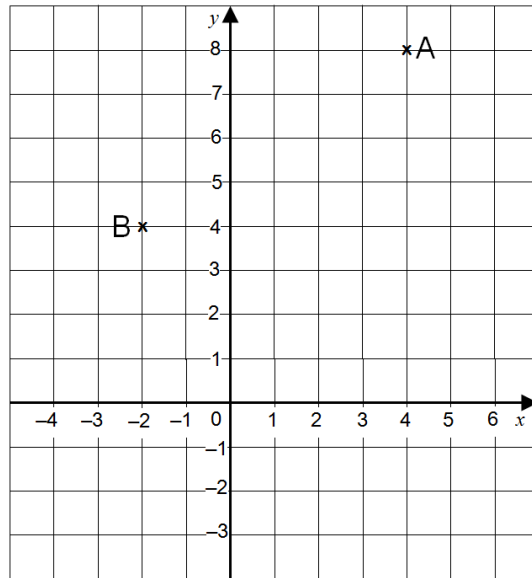
b) 0.345×0.62

..... (1)

c) $213.9 \div 62$

..... (1)

15. Look at the points shown on the graph.

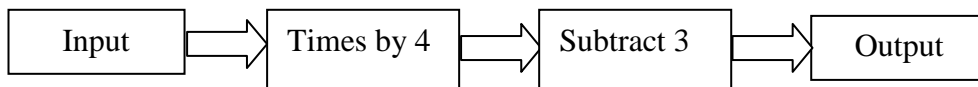


- a) Write down the coordinates of point A.

(.....,) (1)
- b) Write down the coordinates of point B.

(.....,) (1)
- c) Mark the point $(2, -2)$ with a cross (x) and label it C. (1)

16. Here is a rule



- a) If the input is 3 what is the output

..... (1)
- b) If the output is 29 what is the input

..... (1)

17. A regular pentagon has an angle marked x as shown.

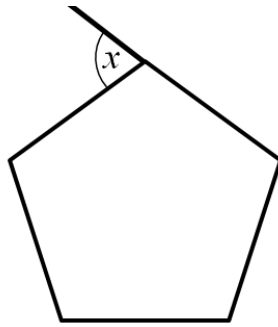


Diagram not drawn accurately

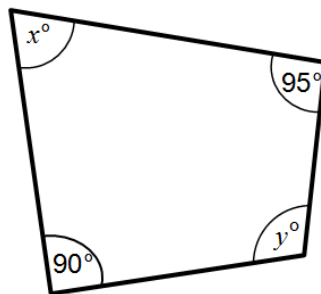
- a) Write down the name for the angle marked as x .

.....angle (1)

- b) Calculate the size of the angle marked as x
Show all your working.

.....° (2)

Look at the quadrilateral below.



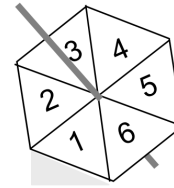
- c) Use your compass to measure the angle marked as y

.....° (1)

- d) Calculate the angle marked as x .
Do NOT use a compass and show all your working.

.....° (1)

18. Look at the six sided *fair* spinner.



a) What is the probability of getting a '1'?

..... (1)

b) Henry spun the spinner 60 times.
Estimate how many times he would get a '1' or a '6'?

..... (2)

19. An X-box normally costs £280

In a sale there was 15% off the normal price.

Calculate the sale price for the X-box.

£..... (3)

20. Three friends shared £240 between them in the ratio 1 : 2 : 3

How much did they each get.

£..... and £..... and £..... (2)

21. The two way table shows the favourite TV programs for 50 adults

	Men	Women	Total
EastEnders	8		18
Strictly Come Dancing	7	8	
Doctor Who			9
Merlin	5		8
Total	26		50

a) Complete the two-way table

(3)

A man is picked at random

b) What is the probability that his favourite TV program is Merlin

..... (1)

22. a) Simplify:

i) $a + 3 + a + a$

..... (1)

ii) $p \times p \times p \times p$

..... (1)

iii) $5x - 2y - x + 3y$

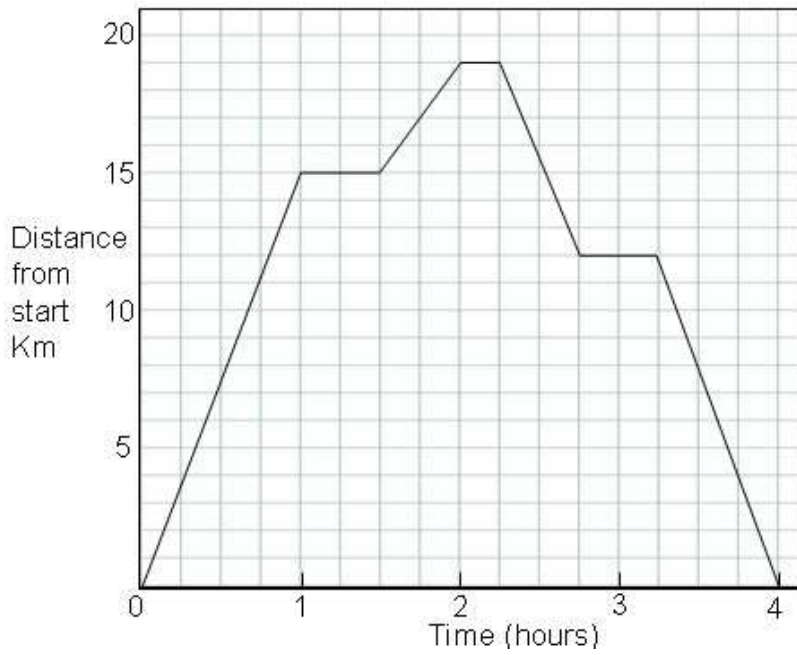
..... (2)

b) Expand

$y(3y - 2)$

..... (2)

23. The graph shows how far Jane travelled on her bike ride.



a) How many times did she stop for a rest?

..... (1)

b) After 2 hours how far had she travelled?.

.....km (1)

c) Calculate Jane's average speed for the last 45 minutes of her ride.
Give your answer in kilometres per hour.

.....kmph (2)

24. What is:

a) $3\frac{1}{2} + 2\frac{3}{5}$

Write your answer as a mixed number.

..... (2)

b) $3\frac{1}{2} \times 2\frac{3}{5}$

Write your answer as a mixed number.

..... (2)

25. a) Solve

i) $3x + 5 = 14$

$x =$ (2)

ii) $4y - 5 = 15$

$y =$ (2)

p is an integer such that $-2 \leq p < 4$

b) List all the possible values of p .

..... (2)

26. Seven students had a Maths and English test. Here are the scores out of 10.

Student	Maths	English
David	7	7
Jane	8	5
Laura	8	6
Stuart	6	8
Matthew	5	6
Pete	6	7
Vicky	8	3

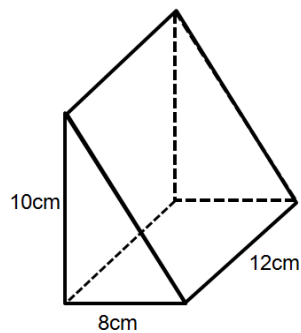
a) What is the Median score for Maths

..... (1)

b) What is the Mean score for English

..... (2)

27. Calculate the volume of the prism below.



..... cm³ (2)