

Name: _____

GCSE Foundation
Set A
Non - Calculator Paper



Corbettmaths

Equipment

1. A blue or black ink ball-point pen.
2. A pencil.
3. An eraser.
4. A ruler.
5. A pair of compasses.
6. A protractor.

Guidance

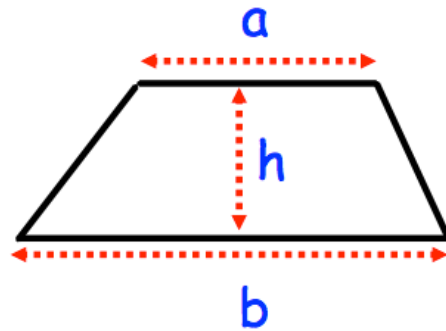
1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

Information

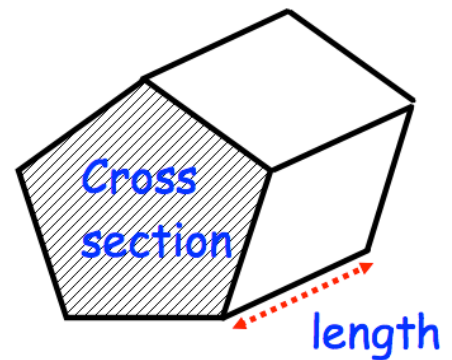
1. The maximum mark for this paper is 100.
2. The marks for questions are shown in brackets
3. You may ask for more lined, graph or tracing paper.

Question	Mark	Available
1		2
2		5
3		3
4		2
5		3
6		4
7		4
8		5
9		2
10		2
11		4
12		4
13		4
14		4
15		6
16		3
17		2
18		4
19		4
20		4
21		4
22		2
23		3
24		3
25		3
26		3
27		4
28		5
29		2
Total		100

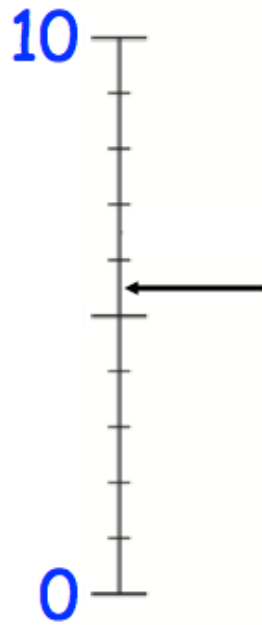
Area of a Trapezium = $\frac{1}{2}(a + b)h$



Volume of a prism = area of cross section x length

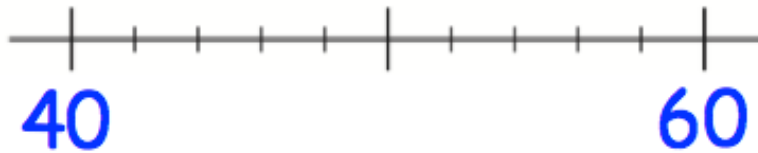


1. (a) Write down the number shown by the arrow.



.....
(1)

(b) Draw an arrow to show the number 44 on this number line.



(1)

2. (a) Write down the value of the digit 3 in the number 2931.

.....
(1)

(b) A drink costs 74p.
A banana costs 39p

Work out the total cost.
Give your answer in pounds.

.....
(2)

(c) Work out 76×5

.....
(2)

3. The pictogram shows the numbers of hours of sunshine in cities on a particular day.

 = 2 hours of sunshine

Norwich	     
Dublin	   
Belfast	   
Aberdeen	 
Cardiff	   
Glasgow	

- (a) Work out the number of hours of sunshine in Dublin.

.....
(1)

- (b) Work out the number of hours of sunshine in Norwich.

.....
(1)

There were 5 hours of sunshine in Glasgow.

- (c) Use this information to complete the pictogram

(1)

4. (a) Work out $\frac{1}{3}$ of £18

£.....
(1)

(b) Work out $\frac{3}{5}$ of 40 seconds

..... seconds
(1)

5. Here are the first 5 terms in a number sequence.

64 68 72 76 80

(a) Write down the next term in this number sequence.

.....
(1)

(b) Write down the 10th term in this number sequence.

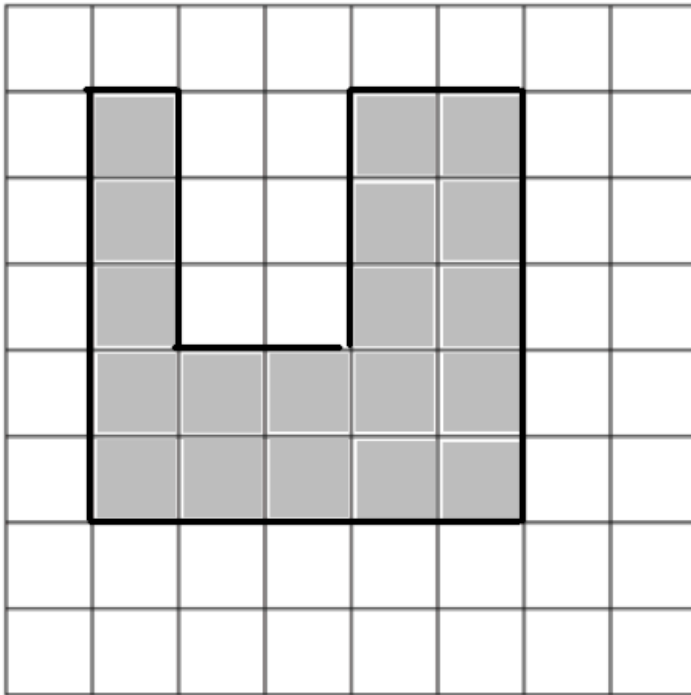
.....
(1)

209 cannot be a term in this number sequence.

(c) Explain why.

.....
(1)

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



(a) Work out the perimeter of the shaded shape.
State the units of your answer.

.....
(2)

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

.....
(2)

7. Here is part of a timetable for a bus timetable from Southville to Bakerstown.

Southville	09 18	10 38	12 05
Leek	09 28	10 48	-----
Milton	09 41	11 01	-----
Newtown	09 49	11 09	-----
Red Island	09 55	11 15	12 36
Sandville	10 13	11 33	-----
Bakerstown	10 31	11 51	13 00

A bus leaves Southville at 10 38

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

.....
(1)

(b) How long will the journey take?

.....minutes
(1)

James arrives at the Leek bus stop at 10 29.
He waits for the next bus to Red Island.

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

.....minutes
(1)

(ii) At what time should James arrive at Red Island?

.....
(1)

8. (a) Simplify $a + a + a$

.....
(1)

(b) Simplify $5w - w$

.....
(1)

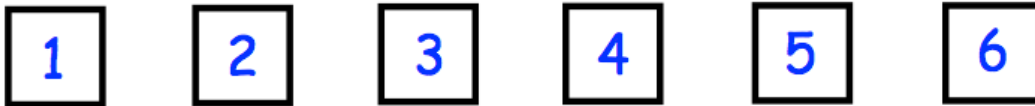
(c) Simplify $c \times 3 \times c$

.....
(1)

(d) Simplify $8x + 3y + x - 4y$

.....
(2)

9. The following number cards are placed in a bag.



A card is taken out at random.

Find the probability that the number on the card is:

(a) 4

.....
(1)

(b) greater than 2

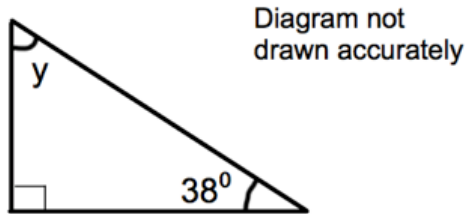
.....
(1)

10. Jonathan buys six kilograms of onions at 48p per kilogram.

How much change does he get from £20.

£.....
(2)

11. (a) The diagram shows a right angled triangle.



Work out the value of y .

$y = \dots\dots\dots$ degrees
(2)

(b) The diagram shows two intersecting straight lines.

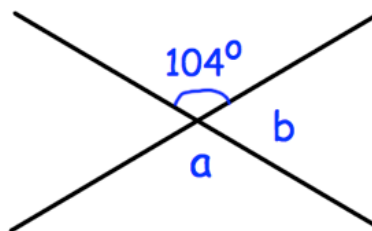
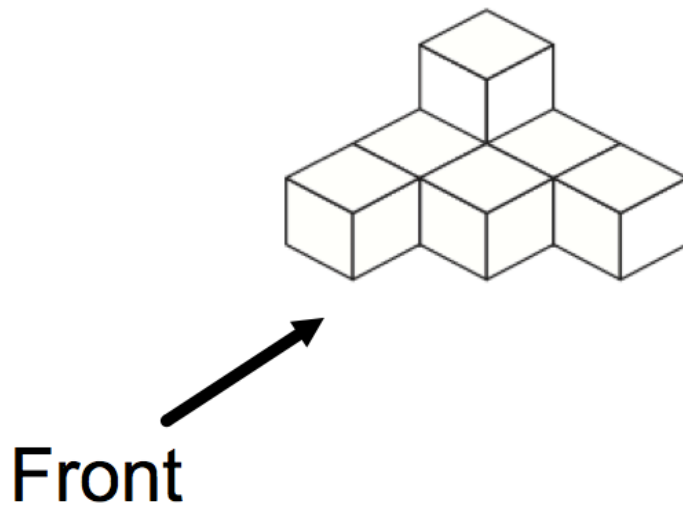


Diagram not drawn accurately.

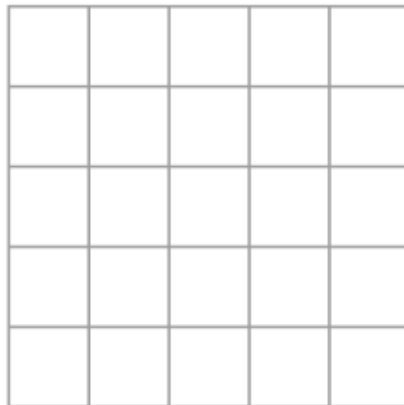
Work out the values of a and b .

$a = \dots\dots\dots$ degrees and $b = \dots\dots\dots$ degrees
(2)

12. Laura makes a solid shape using centimetre cubes.

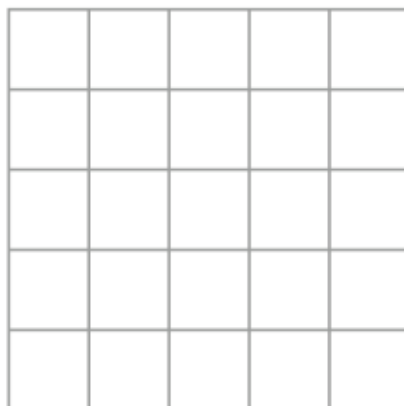


(a) Draw the front elevation on the grid below.



(2)

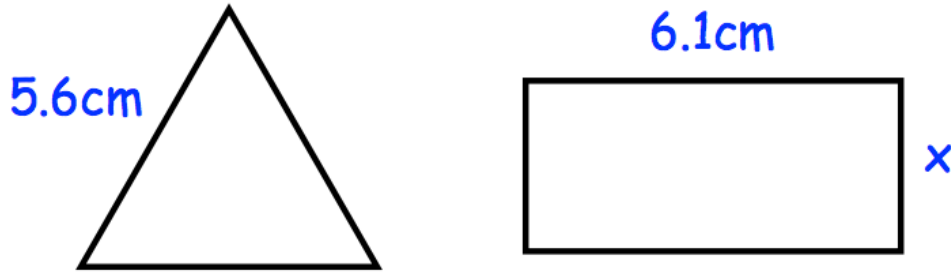
(b) Draw the plan view on the grid below.



(2)

13. The diagram below shows an equilateral triangle and a rectangle.

Not drawn accurately

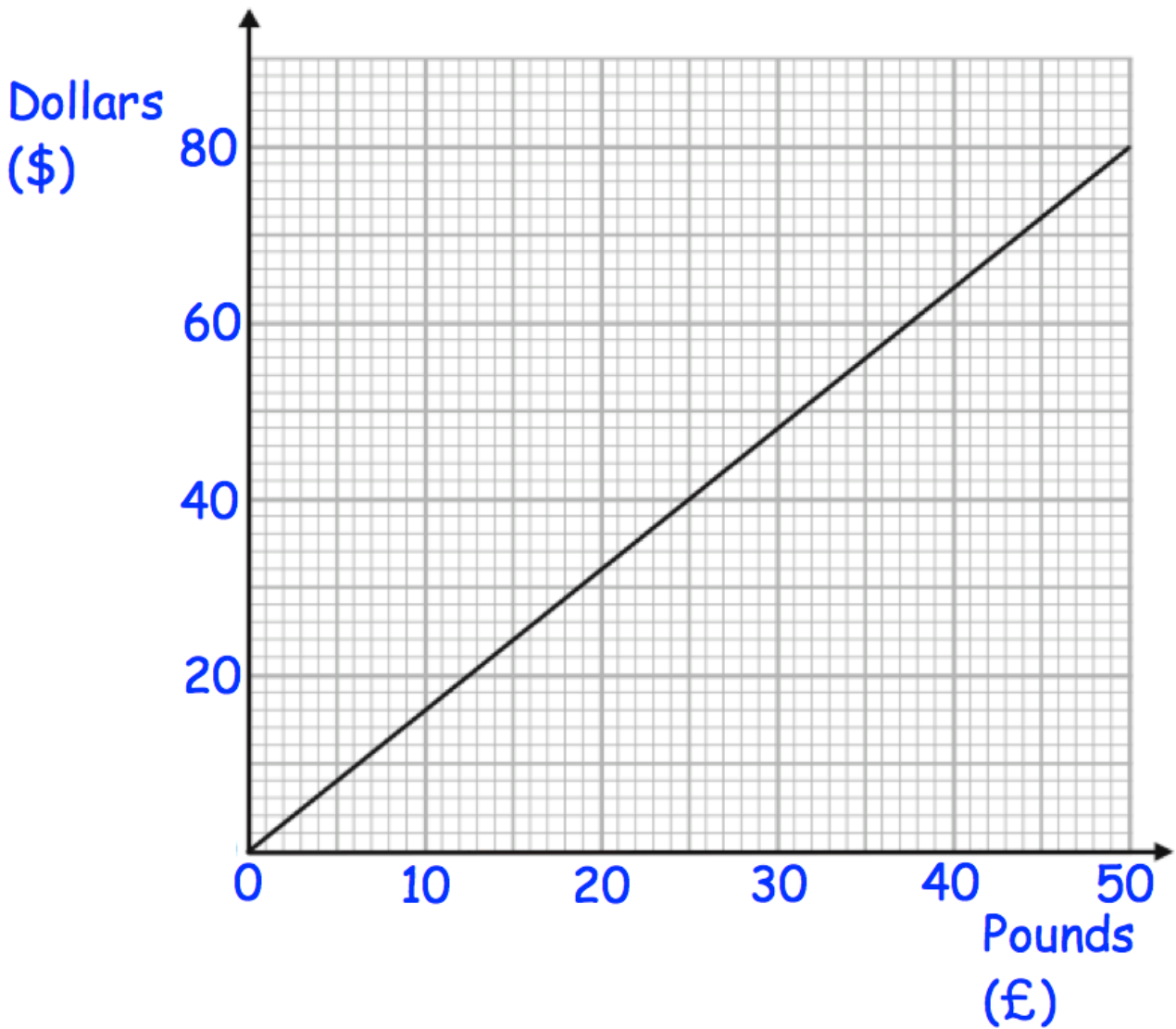


The perimeter of the equilateral triangle is the same as the perimeter of the rectangle.

Work out the width of the rectangle, x .

.....cm
(4)

14. The graph below is used to convert between pounds (£) and dollars (\$).



(a) Change £10 into dollars (\$).

\$.....
(1)

In Birmingham, a jacket costs £80.
The same jacket in Seattle costs \$130.

(b) In which city is the jacket cheaper and by how much?

.....
(3)

15. (a) Solve $w + 3 = 19$

$$w = \dots\dots\dots$$

(1)

(b) Solve

$$\frac{x}{2} = 10$$

$$x = \dots\dots\dots$$

(1)

(c) Solve $10y - 4 = 24$

$$y = \dots\dots\dots$$

(2)

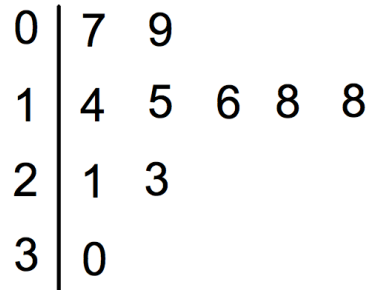
(d) Solve $3z - 3 = z + 9$

$$z = \dots\dots\dots$$

(2)

16. The number of passengers on 10 buses was recorded.
The stem and leaf diagram shows this information.

Key: 1|4 means 14 passengers



- (a) Write down the mode.

.....
(1)

- (b) Work out the median.

.....
(1)

The next bus has 32 passengers.

- (c) Tick the box to show how this will effect the range.

The range will
decrease

The range will
stay the same

The range will
increase

(1)

17. Shown below is a recipe for Stuffed Turkey.

Stuffed Turkey

Serves 4

Turkey	500g
Red Onion	1
Garlic Cloves	2
Chestnut Mushrooms	150g
Spinach	140g
Chicken Stock	300ml

Mary wants to make Stuffed Turkey for 10 people.

How much spinach does Mary need?

.....g
(2)

18.

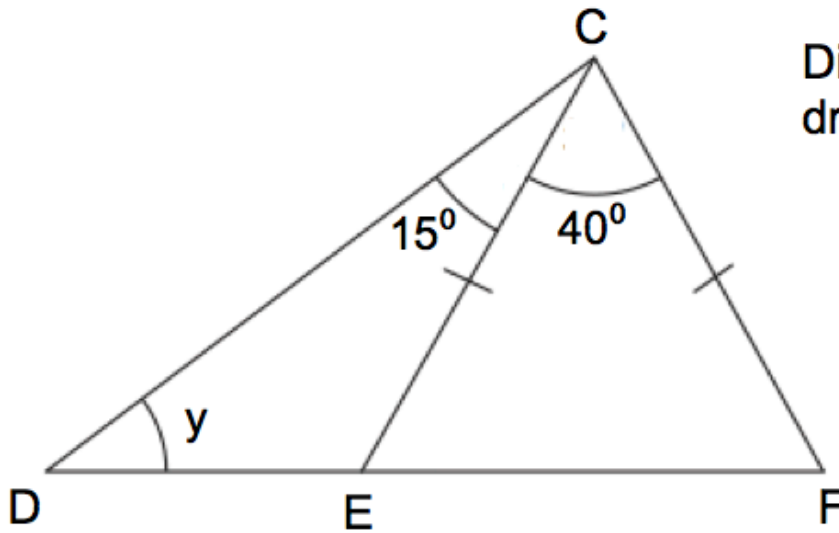


Diagram not
drawn accurately

DEF is a straight line.

$CE = CF$.

Angle ECF is 40° .

Angle DCE is 15° .

Find the size of the angle marked y .

.....^o
(4)

19. Martha buys 80 umbrellas.
She pays £4 for each umbrella.

Martha sells $\frac{1}{2}$ of the umbrellas for £8 each.
She sells $\frac{2}{5}$ of the umbrellas for £7 each.

Martha wants to make a total profit of £240.
How much should she sell each of the remaining bags for?

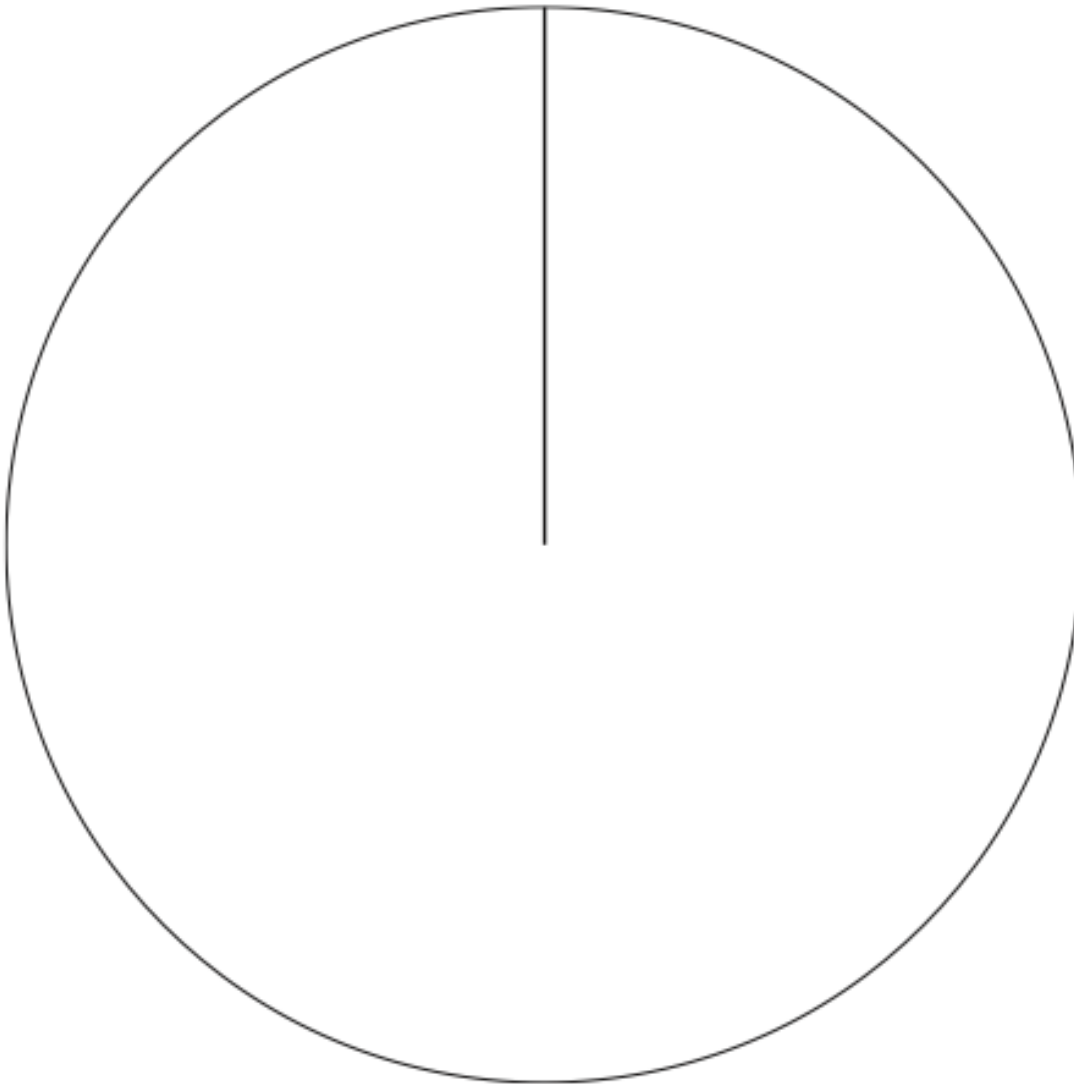
You **must** show your method.

£.....
(4)

20. The table gives information about students staying after school to play sport.

Sport	Frequency
Netball	15
Hockey	10
Rugby	26
Football	9

Draw an accurate pie chart to show this information.



(4)

21. Poppy asked 100 primary school children how they travel to school.
Each student either walked or cycled.

52 of the students walked.

Twice as many girls than boys cycle to school.

21 of the boys walked to school

Work out how many of the 100 students are girls.

.....
(4)

22. Bradley wants to find out how much time people spend exercising. He is going to use a questionnaire.

Design a suitable question for Bradley to use in his questionnaire.

(2)

-
23. Arrange in order, starting with the smallest.

$\frac{5}{8}$

63%

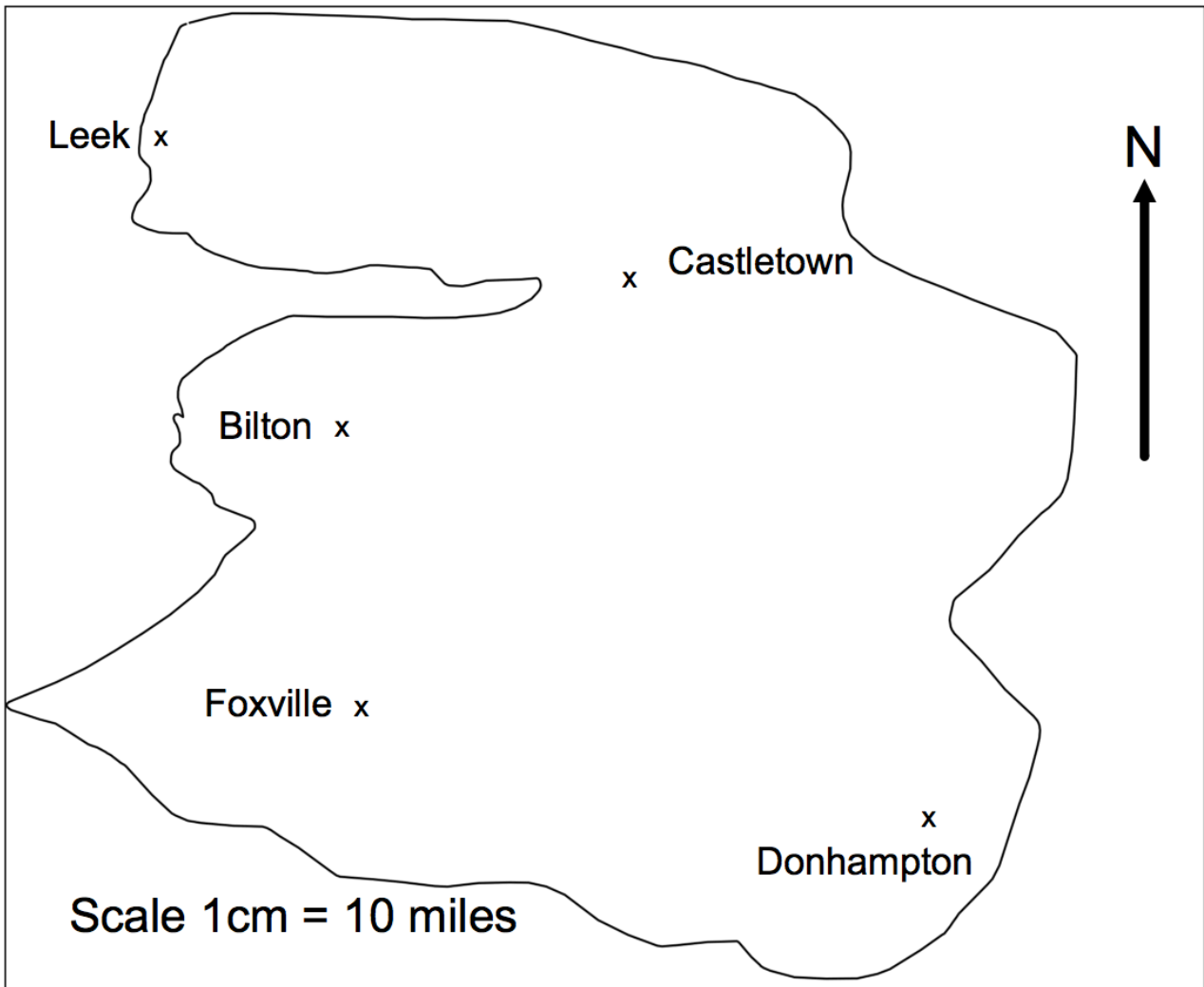
0.7

$\frac{2}{3}$

$\frac{3}{5}$

.....
(3)

24. This is a map of an island.



A helicopter flies in a straight line from Leek to Donhampton.

(a) How far does the helicopter fly?

.....miles
(2)

(b) Write down the bearing of Donhampton from Leek.

.....°
(1)

25. In a bag there are red, green and purple counters.

$\frac{3}{8}$ of the counters are red.

$\frac{1}{6}$ of the counters are green.

What fraction of the counters are purple?

.....
(3)

26. Chris and Molly win money in a competition.
They share the money in the ratio 2 : 3
Molly receives £240.

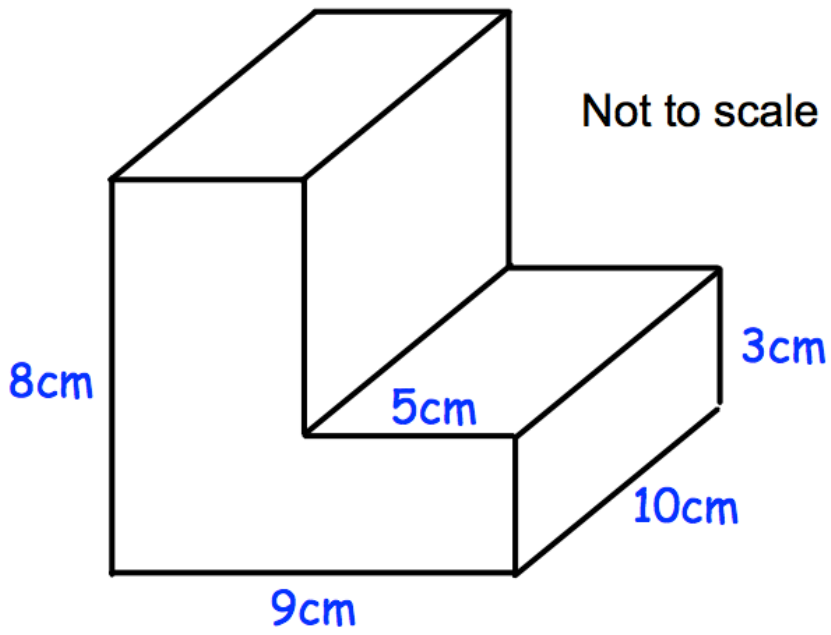
(a) How much money does Chris receive?

£.....
(2)

(b) How much money did they win in the competition?

£.....
(1)

27. The diagram shows a prism.



Work out the volume of the prism.

.....cm²
(4)

28. (a) Express 108 as a product of its prime factors.
Give your answer in index form.

.....
(3)

- (b) Find the Highest Common Factor (HCF) of 108 and 72.

.....
(2)

-
29. Factorise fully

$$8x^3 + 12x$$

.....
(2)