



Corbettmαths

100 Days to Go
GCSE Foundation
Revision Questions

100 Days to Go



Answers

See 14 Days
to Go

1. From the list of numbers



4 7 9 10 11 15 31

97 Days to Go

(a) Write down a factor of 21

7
(1)

(b) Write down a factor of 62

2×31

31
(1)

(c) Write down a factor of 45

3×15

or 9×5

15 or 9
(1)

2. Don says



"the difference between two consecutive cube numbers is always odd."

Is Don correct?

You must show your workings.

Yes

96 Days to Go

$$8 - 1 = 7$$

$$27 - 8 = 19$$

$$64 - 27 = 37$$

$$125 - 64 = 61$$

$$1 \times 1 \times 1 = 1$$

$$2 \times 2 \times 2 = 8$$

$$3 \times 3 \times 3 = 27$$

$$4 \times 4 \times 4 = 64$$

$$5 \times 5 \times 5 = 125$$

(2)

3. (a) Write 60 as a product of its prime factors.

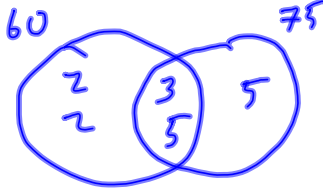


53 Days to Go

$$\begin{array}{r} 2 \times 2 \times 3 \times 5 \\ \hline 2^2 \times 3 \times 5 \end{array} \quad (2)$$

- (b) Find the Lowest Common Multiple (LCM) of 60 and 75.

$$\begin{array}{l} 60 = 2 \times 2 \times 3 \times 5 \\ 75 = 3 \times 5 \times 5 \end{array}$$



$$\begin{array}{l} \text{LCM} = 2 \times 2 \times 3 \times 5 \times 5 \\ = 300 \end{array}$$

$$\begin{array}{r} 75 \\ \hline 3 \times 5 \times 5 \\ 300 \end{array} \quad (2)$$

4. Penny gets £8 pocket money.
She is given an increase of £3.



- (a) Write down £3 as a fraction of £8

49 Days to Go

$$\begin{array}{r} \frac{3}{8} \\ \hline \end{array} \quad (1)$$

- (b) Write your answer as a percentage

$$3 \div 8 = 0.375$$

$$\begin{array}{r} 37.5\% \\ \hline \end{array} \quad (1)$$

5. Jo has a recipe for Bolognese Sauce,



Bolognese Sauce		$\div 5$	$\times 4$
Minced Beef	500 g	100g	400g
Chopped Tomatoes	750 g	150g	600g
Mushrooms	40 g	8g	32g
Chicken Stock	150 ml	30ml	120ml

She only has 400g of minced beef.

43 Days to Go

How much of the other ingredients should she use?

Chopped Tomatoes:g

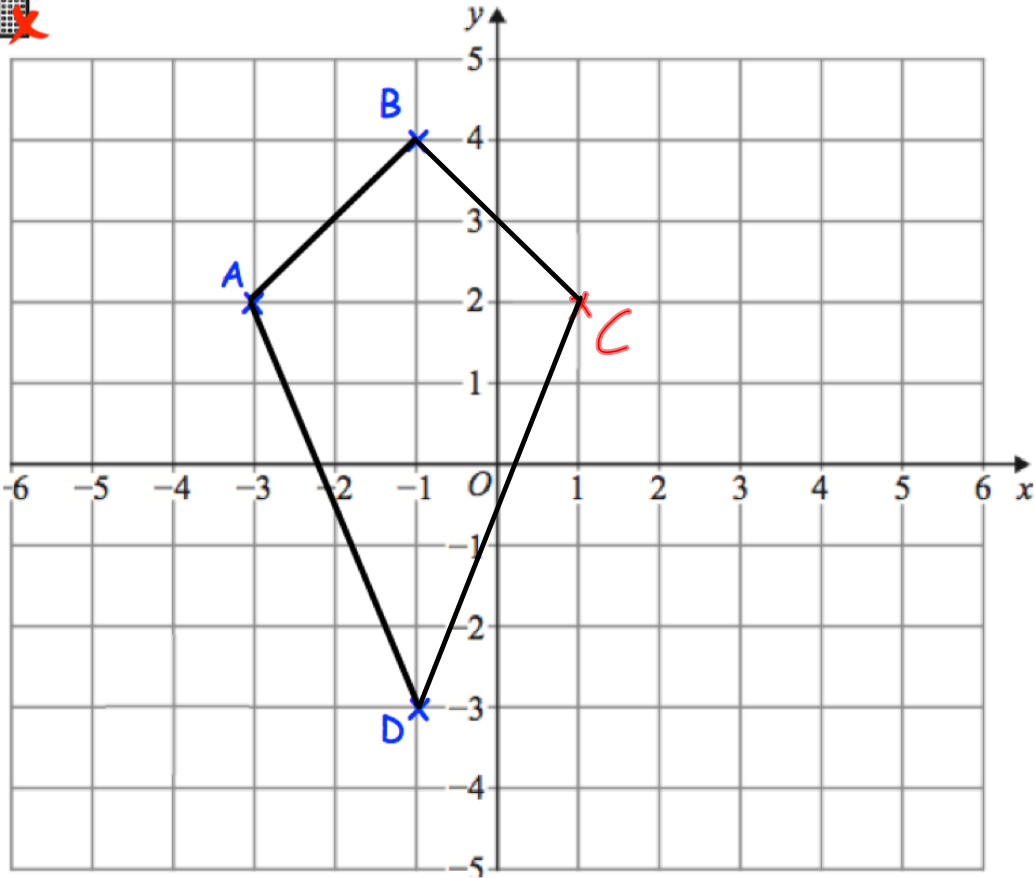
Mushrooms:g

Chicken Stock:ml

(3)

6. The points A (-3, 2), B (-1, 4) and D (-1, -3).

70 Days to Go



ABCD is a kite.

Complete the kite and write down the coordinates of C.

(1, 2)
(.....,)
(2)

7. An airplane has economy and first class seating.



There are s seats in each row in economy.

There are t seats in each row in first class.

69 Days to Go


There are 9 rows in first class and 24 rows in economy.

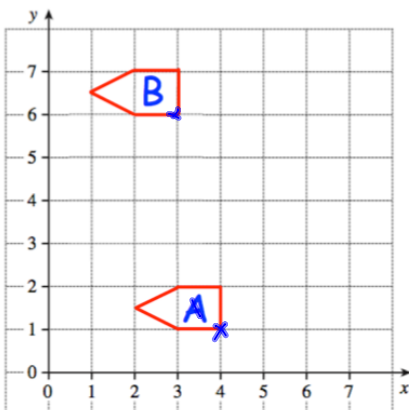
Write down an expression, in terms of s and t , for the number of seats on the airplane.

$$9t + 24s$$

$$\frac{9t + 24s}{\dots\dots\dots}$$

(2)

8. 



()

27 Days to Go

Write down the translation vector that would take A to B.

$$\begin{pmatrix} -1 \\ 5 \end{pmatrix}$$

(1)

9. Hannah is recording the number of letters in each word in an article.



These are the first ten lengths.

$$3 + 4 + 5 + 6 + 2 + 4 + 3 + 7 + 3 + 6 + 4 = 47$$

$$47 \div 11 = 4.2727\text{--}$$

86 Days to Go

(a) Work out the median.

~~2 3 3 3 4 4 5 6 6 7~~

~~2 3 3 3 4 4 4 5 6 6 7~~ 4 (2)

(b) Calculate the mean.

$$3 + 4 + 5 + 6 + 2 + 4 + 3 + 7 + 3 + 6 = 43$$

$$43 \div 10 = 4.3$$

..... 4.3 (2)

The 11th word has 4 letters.

(c) Tick the box which describes what affect this will have on the mean.

The mean will decrease

The mean will remain the same

The mean will increase

(1)

(d) Tick the box which describes what affect this will have on the median.

The median will decrease

The median will remain the same

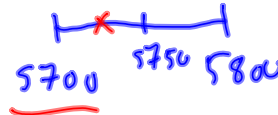
The median will increase

(1)

10. (a) Write 5725 to the nearest 100.



99 Days to Go



5700

(1)

(b) Write 83.07718 correct to two decimal places.

83.08

(1)

(c) Write 6.35 correct to 1 decimal place.

6.4

(1)

(d) Write 129.34952 correct to 1 decimal place.

129.3

(1)

11. Work out



(a) $(2 + 5)^2$

$$7^2 = 49$$

0
0
DM
AS

98 Days to Go

49

.....
(1)

(b) $5 + 3 \times 6$

$$5 + 18 = 23$$

23

.....
(1)

12. Work out, as a simplified fraction.



$$\frac{3}{4} + \frac{2}{9}$$

93 Days to Go

$$\frac{27}{36} + \frac{8}{36} = \frac{35}{36}$$

$\frac{35}{36}$

.....
(2)

13. Work out



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

92 Days to Go

Give your answer as a mixed number.


$$\frac{4}{3} \times \frac{12}{5} = \frac{48}{15}$$

$$= 3\frac{3}{15}$$

$$= 3\frac{1}{5}$$

$3\frac{1}{5}$

.....
(3)

14.  At Frome International train station, 35% of trains were late in a week.
In that week there were 440 trains.


Calculate how many trains were on time.

$$440 \div 100 = 4.4 \quad 50 \text{ Days to Go}$$

$$4.4 \times 35 = 154 \text{ late trains}$$

$$440 - 154 = 286 \quad 286$$

.....
(3)

15.  At a rugby match, the ratio of children to adults is 2 : 3.
There are 80 children in the crowd.
Each adult ticket costs £8
Each child ticket costs a quarter of the adult ticket.

$$8 \div 4 = \pounds 2$$

Work out the total money made from ticket sales.

$$80 \div 2 = 40$$

48 Days to Go

$$40 \times 3 = 120 \text{ adults}$$

80 children

$$120 \times 8 = \pounds 960$$

$$80 \times 2 = \pounds 160$$

$$960 + 160 = \pounds \underline{\underline{1120}}$$

£.....

(4)

16.

$$v = u + at$$

(a) Work out v when $u = 23$, $a = 4$ and $t = 3$

$$\begin{aligned} v &= 23 + (4 \times 3) \\ &= 23 + 12 \\ v &= 35 \end{aligned}$$

61 Days to Go

35

(2)

(b) Work out u when $v = 30$, $a = 2$ and $t = 8$

$$\begin{aligned} 30 &= u + 16 \\ -16 &\quad -16 \\ 14 &= u \end{aligned}$$

14

(2)

17. Tony makes a fair six-sided spinner.

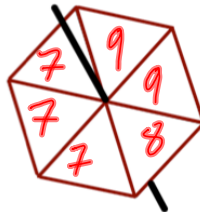


The spinner has the numbers 7, 8 and 9 on it.

The probability the spinner will land on 7 is greater than the probability that the spinner will land on 8.

The probability that the spinner will land on 9 is $\frac{1}{3}$

Write the numbers on the spinner.



83 Days to Go

$$6 \div 3 = 2$$

(2)

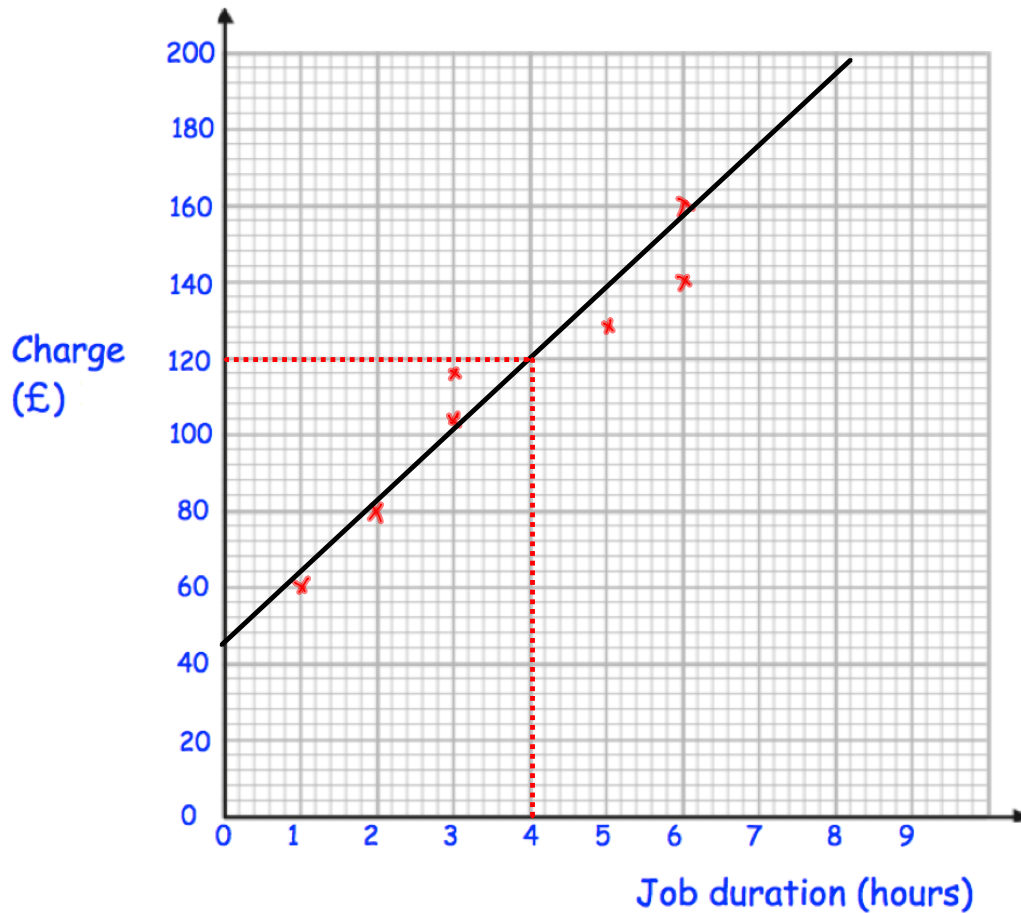
18. The table shows the charge (£) by plumbers for jobs of different duration (hours).



Job duration (hours)	1	2	3	3	5	6	6
Charge (£)	60	80	104	116	128	140	160

(a) Plot the data on the scatter graph below.

87 Days to Go (2)



(b) Describe the correlation.

It is a positive correlation - as the duration increases, so does the cost.

(1)

(c) Draw a line of best fit on the scatter graph.

(1)

(d) Use your line of best fit to estimate the charge for a 4 hour job.

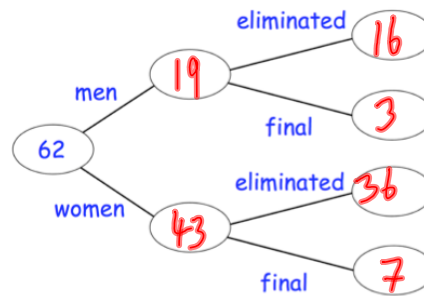
£.....120.....
(1)

(e) Explain why it may **not** be appropriate to use your line of best fit to estimate the charge for a job lasting 12 hours.

It is beyond the range of the given data.
(1)

19. 62 people took part in a talent show
43 of the people were women and the rest were men.
10 people made it through to the final and the rest were eliminated.
3 men made it through to the final

$$62 - 43 = 19$$



90 Days to Go

$$43 - 7 = 36$$

a) Complete the frequency tree

(2)

b) What fraction of the men made it through to the final?

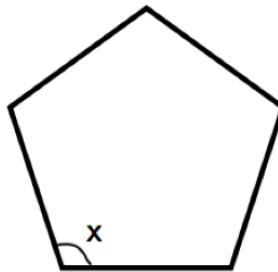
$\frac{3}{19}$
.....
(2)

20. Shown below is a regular pentagon.



$$(5-2) \times 180$$
$$3 \times 180 = 540^\circ$$

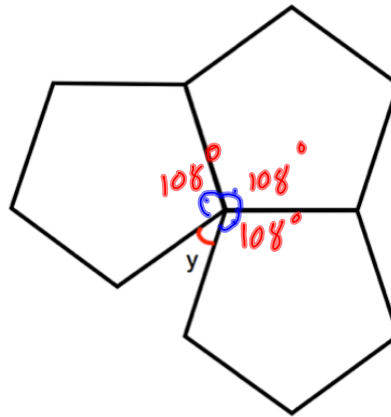
$$540^\circ \div 5 = 108^\circ$$



78 Days to Go

(a) Find the size of each interior angle.

$$x = \frac{108}{(2)}^\circ$$



Three identical regular pentagons are joined as shown above.

(b) Work out the size of angle y.

$$3 \times 108 = 324$$
$$360 - 324 = 36^\circ$$

$$y = \frac{36}{(2)}^\circ$$

21. A car travels 240 kilometres in 3 hours 45 minutes



Calculate the average speed, in km/h, of the car.

$$s = \frac{d}{t}$$

$$= \frac{240}{3.75}$$

31 Days to Go

.....64.....km/h
(3)

22. The time for ten students to complete a race is below.



Time (t seconds)	Frequency
20 < t ≤ 40	3
40 < t ≤ 60	5
60 < t ≤ 80	2

$$f_1$$

$$90$$

$$250$$

$$140$$

$$480$$

10

Work out an estimate for the mean time taken.

$$480 \div 10 = 48 \text{ seconds}$$

84 Days to Go

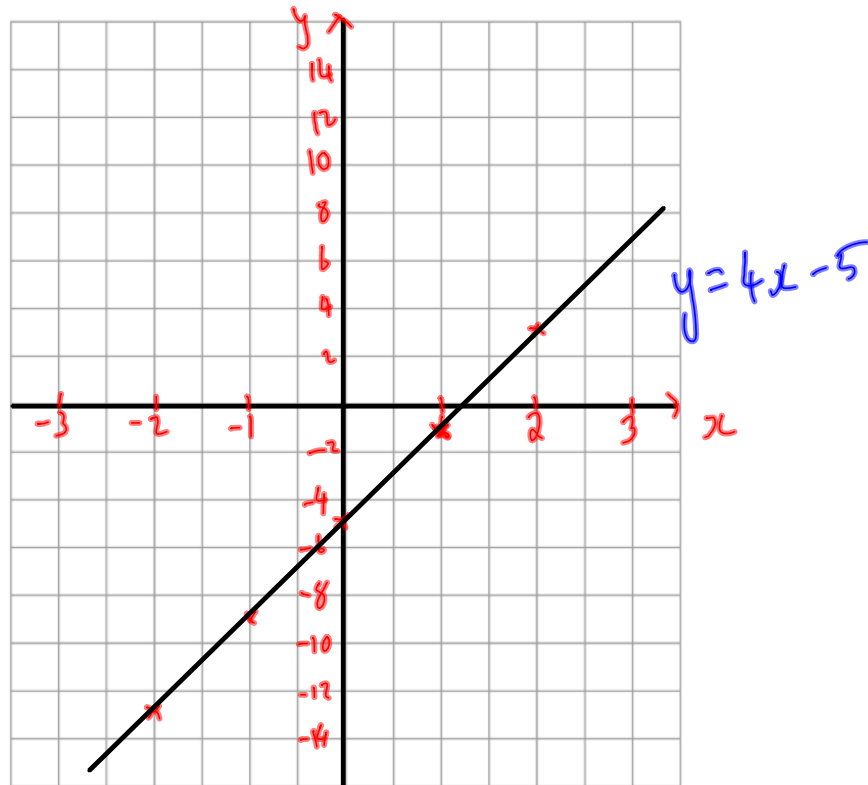
.....seconds
(4)

23.

On the grid, draw $y = 4x - 5$ for values of x from -2 to 2 .



x	-2	-1	0	1	2	
y	-13	-9	-5	-1	3	60 Days to Go



(4)

24.

A fish tank sprung a leak and loses 20% of its water. There is now 240 litres of water in the fish tank.



How much water was in the fish tank before the leak?

	80%	\longrightarrow	240 Litres	44 Days to Go
$\div 80$	\downarrow		3 Litres	
$\times 100$	\downarrow		300 Litres	300
			
				(3)

25. Peter's weight decreases from 80kg to 64kg.



Calculate the percentage decrease in Peter's weight.

$$\frac{\text{Change}}{\text{original}} \times 100$$

$$\frac{16}{80} \times 100$$

47 Days to Go

$$\dots\dots\dots 20\%$$

(2)

26. Work out



$$4^{-2}$$

$$\frac{1}{4^2}$$

52 Days to Go

$$\frac{1}{16}$$

(1)

27. Expand and simplify

$$(w - 6)(w + 7)$$



$$w^2 + 7w - 6w - 42$$

$$w^2 + w - 42$$

63 Days to Go

$$\dots\dots\dots w^2 + w - 42$$

(2)

28. Solve $4y + 1 = 29 - 2y$



$$+2y \quad +2y$$

$$6y + 1 = 29$$

$$-1 \quad -1$$

$$6y = 28$$

$$\div 6 \quad \div 6$$

$$y = \frac{28}{6}$$

$$y = \frac{28}{6}$$

$$y = \frac{14}{3}$$

67 Days to Go

$$y = \dots\dots\dots \frac{14}{3}$$

(2)

$$4\frac{2}{3}$$

29. Work out the n th term for this sequence



12 22 32 42 52
 $10n$ 10 20 30 40 50

11 Days to Go

$$\frac{10n + 2}{(2)}$$

30. Factorise fully



$$9m^2 - 12mp$$

64 Days to Go

$$3m(3m - 4p)$$

$$\frac{3m(3m - 4p)}{(2)}$$

31. Factorise $x^2 + 4x - 12$



$$(x + 6)(x - 2)$$

62 Days to Go

$$\frac{(x + 6)(x - 2)}{(2)}$$

32. Solve the inequality $4x + 6 \geq 8$



$$\begin{aligned} & -6 \quad -6 \\ 4x & \geq 2 \\ \div 4 \quad \div 4 \\ x & \geq 0.5 \end{aligned}$$

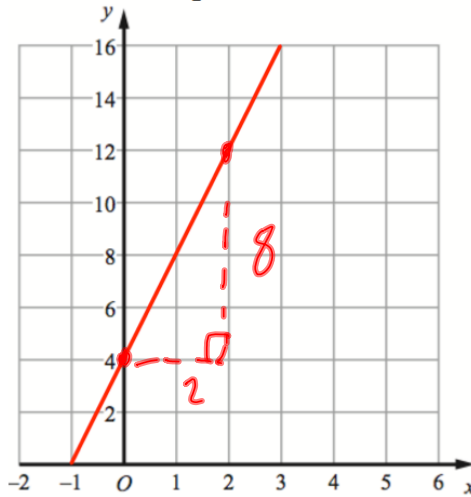
12 Days to Go

$$\frac{x \geq 0.5}{(2)}$$

33. A straight line L is shown on the grid.



$$\begin{aligned}
 m &= \frac{\text{rise}}{\text{run}} \\
 &= \frac{8}{2} \\
 &= 4
 \end{aligned}$$



$$\begin{aligned}
 y &= mx + c \\
 y &= 4x + 4
 \end{aligned}$$

Work out the equation of line L

59 Days to Go

.....
(3)

34. Sebastian leaves £3000 in the bank for two years.
It earns compound interest of 2% per year.



Calculate the total amount Sebastian has in the bank at the end of the two years.

$$\text{initial} \times \text{multiplier}^{\text{time}}$$

45 Days to Go

$$3000 \times 1.02^2 = \pounds 3121.20$$

£.....
(2)

35. Write the following numbers in standard form.



(a) 5600

$$A \times 10^x$$

51 Days to Go

$$5.6 \times 10^3$$

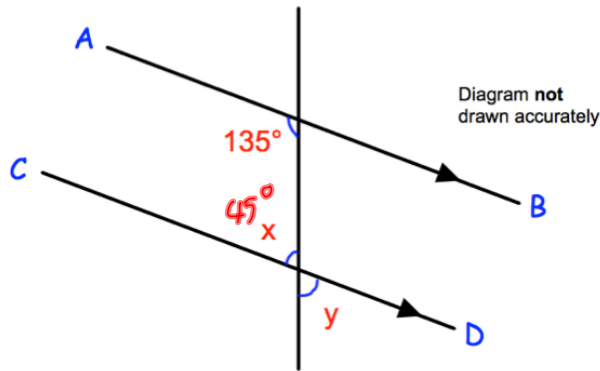
(1)

(b) 41200000

$$4.12 \times 10^7$$

(1)

36. In the diagram AB is parallel to CD.



$$\begin{array}{r} 7 \\ 180 \\ - 135 \\ \hline 45 \end{array}$$

79 Days to Go

(a) Work out the size of the angle marked x.

$$45^\circ$$

Give a reason for your answer.

They are co-interior angles (135° & x)
so they add to 180° .

(2)

(b) Write down the value of y.

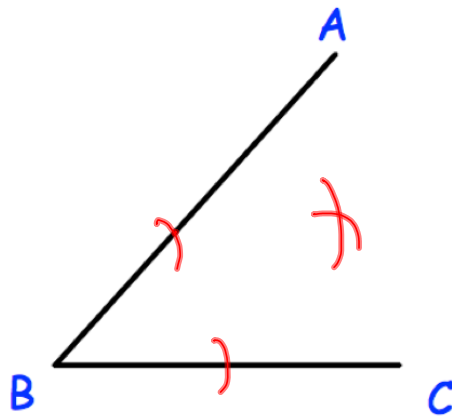
$$45$$

Give a reason for your answer.

It is vertically opposite to x, so they are equal.

(2)

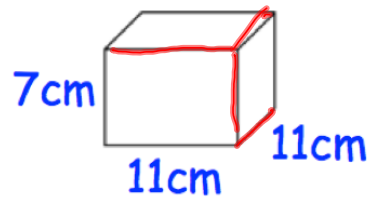
37. Using ruler and compasses, construct the bisector of angle ABC.



76 Days to Go

(2)

38.



Work out the surface area of this cuboid.
State the units of your answer.

front $11 \times 7 = 77\text{cm}^2$
back 77cm^2
top $11 \times 11 = 121\text{cm}^2$
bottom $= 121\text{cm}^2$
right $7 \times 11 = 77\text{cm}^2$
left 77cm^2

21 Days to Go

$$77 + 77 + 121 + 121 + 77 + 77 = 550\text{cm}^2$$

.....
(3)

39. What is the volume of a piece of metal that has a mass of 300g and density of 6g/cm³?



$$v = \frac{m}{d}$$

$$v = \frac{300}{6}$$

30 Days to Go

$$v = 50 \text{ cm}^3$$

$$\frac{300}{6} = 50 \text{ cm}^3$$

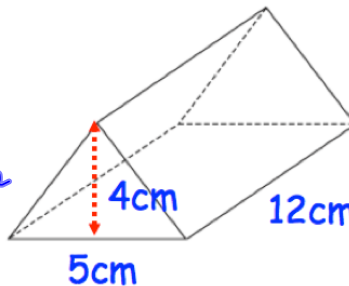
50
.....cm³
(2)

40. Shown below is a triangular prism.



$$\frac{1}{2}(5 \times 4)$$

$$\frac{1}{2}(20) = 10 \text{ cm}^2$$



Find the volume of the triangular prism.

22 Days to Go

$$10 \times 12 = 120$$

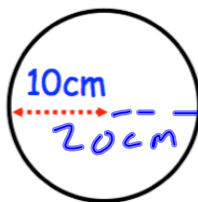
120
.....cm³
(3)

41. Shown below is a circle with radius 10cm.



$$C = \pi \times 20$$

$$= 20\pi$$



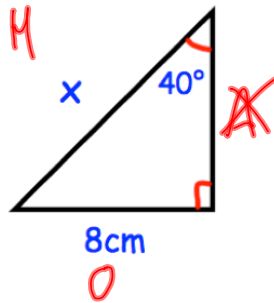
28 Days to Go

$$C = \pi \times d$$

Work out the circumference of the circle.
Give your answer in terms of π .

20 π
.....cm
(2)

42. The diagram shows a right-angled triangle.



Calculate the length of x .

23 Days to Go

$$\sin \theta = \frac{o}{h}$$

$$\sin(40) = \frac{8}{x}$$

$$\sin(40) \times x = 8$$

$$\div \sin(40) \quad \div \sin(40)$$

$$x = \frac{8}{\sin 40}$$

$$12.44579061$$

$$\underline{\underline{12.446}} \text{ cm}$$

(3)

43. Given



$$a = \begin{pmatrix} 6 \\ -4 \end{pmatrix} \quad b = \begin{pmatrix} -2 \\ 1 \end{pmatrix}$$

Work out $2a + b$

$$2a = \begin{pmatrix} 12 \\ -8 \end{pmatrix} \quad \begin{pmatrix} 12 \\ -8 \end{pmatrix} + \begin{pmatrix} -2 \\ 1 \end{pmatrix} = \begin{pmatrix} 10 \\ -7 \end{pmatrix}$$

19 Days to Go

$$\underline{\underline{\hspace{2cm}}} \text{ (3)}$$

44. Nigel measures the time, t seconds, to complete a race as 14.8 seconds correct to the nearest tenth of a second.



Write down the error interval for t .

$$14.75 \leq t < 14.85$$

40 Days to Go

(2)

45. Calculate the value of



$$\sqrt[3]{(25.4 - 5.9)^2}$$

39 Days to Go

(a) Write down your full calculator display.

7.244744507

(1)

(b) Give your answer to three significant figures.

7.24

(1)

46. A circle has an area of 64 cm²



Work out the radius of the circle.

24 Days to Go

$$A = \pi r^2$$

$$64 = \pi r^2$$

$$\div \pi \quad \div \pi$$

$$20.37183272 = r^2$$

$$\sqrt{20.3718...}$$

4.5135

.....cm
to 4 dp (2)

47. Write down the exact value of $\cos 60^\circ$

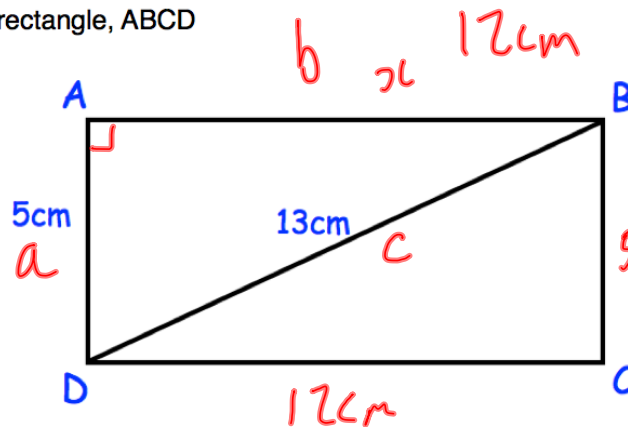


18 Days to Go

$\frac{1}{2}$

(1)

48. Below is rectangle, ABCD



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

$$5^2 + x^2 = 13^2$$

$$25 + x^2 = 169$$

$$x^2 = 144$$

$$x = \sqrt{144}$$

$$x = 12 \text{ cm}$$

AD = 5cm
BD = 13cm

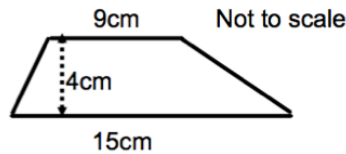
Calculate the perimeter of rectangle ABCD

29 Days to Go

$$12 + 5 + 12 + 5 = 34$$

34
.....cm
(3)

49.



73 Days to Go

Calculate the area of the trapezium.

$$\frac{1}{2}(a+b)h$$

$$12 \times 4 = 48$$

$$\frac{1}{2}(9+15) \times 4$$

$$\frac{1}{2}(24) \times 4$$

48
.....cm²
(2)

50. Candles normally cost £6 each.



Two websites have special offers

Corbettmaths Candles

Buy 3 get 1 free

Laura wants to buy 30 candles.
Which website should Laura use?

3	5	4
6	2	8
9	3	12
12	4	16
15	5	20
18	6	24
21	7	28
24	8	32 x

$$30 \times 6 = \text{£}180$$

$$10\% \rightarrow \text{£}18$$

$$20\% \rightarrow \text{£}36$$

$$180 - 36 = \text{£}144$$

41 Days to Go

$$23 \times \text{£}6$$

$$\begin{array}{r} 23 \\ \times 6 \\ \hline 138 \end{array}$$

$$\text{£}138$$

Corbettmaths Candles

(4)

51. (a) Simplify



$$m^5 \times m^3$$

$$\begin{array}{r} m^8 \\ \hline \end{array} \quad (1)$$

(b) Simplify

$$m^8 \div m^2$$

$$\begin{array}{r} m^6 \\ \hline \end{array} \quad (1)$$

(c) Simplify

$$(m^3)^2$$

68 Days to Go

$$\begin{array}{r} m^6 \\ \hline \end{array} \quad (1)$$

52. The table gives information about the dogs in a village



Breed	Frequency
Spaniel	11
Poodle	7
Greyhound	4
Jack Russell	14

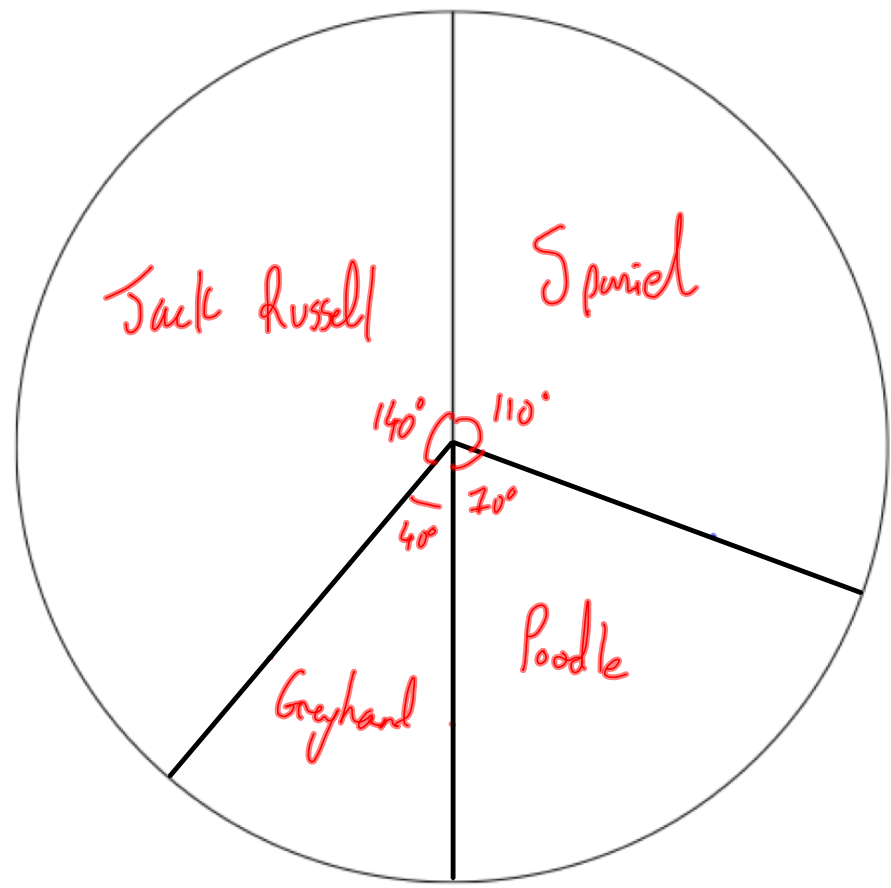
$\frac{+}{36}$

Angle
 110°
 70°
 40°
 140°

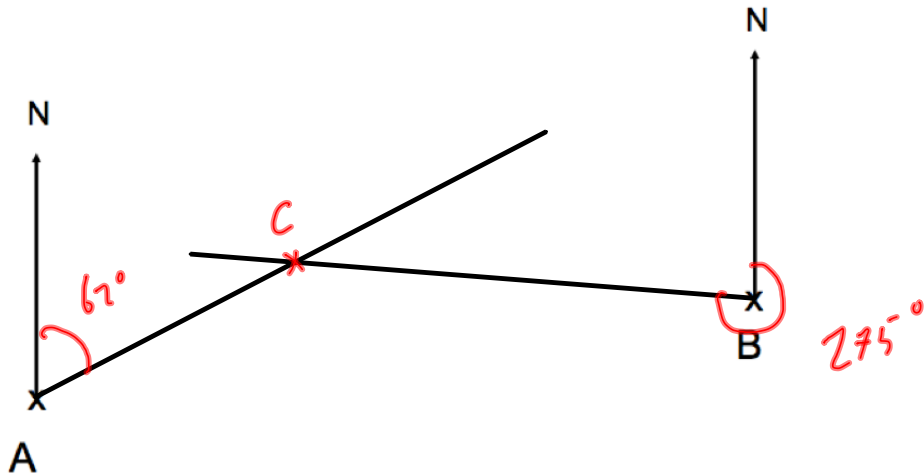
$$360^\circ \div 36 = 10^\circ$$

88 Days to Go

Draw an accurate pie chart to show this information.



53. The diagram shows the position of two people, A and B, who are on their Duke of Edinburgh expedition.



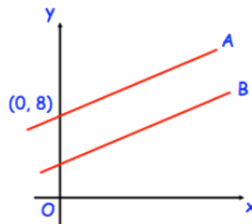
The bearing of person C from person A is 062°
 The bearing of person C from person B is 275°

77 Days to Go

In the space above, mark the position of person C with a cross (x). Label it C.

(3)

- 54.



$$y = mx + c$$

16 Days to Go

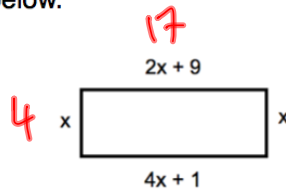
The lines A and B are parallel.
 The line A passes through the point $(0, 8)$
 The line B has equation $y = 3x + 1$

Write down the equation of line A

$$y = 3x + 8$$

.....
(2)

55. A rectangle is shown below.



13 Days to Go

(a) Explain why $4x + 1 = 2x + 9$

The opposite sides of a rectangle have the same length.

(b) Find the size of x .

$$\begin{array}{r} 4x + 1 = 2x + 9 \\ -2x \quad -2x \\ \hline 2x + 1 = 9 \\ -1 \quad -1 \\ \hline 2x = 8 \end{array}$$

$$x = 4$$

(1)

$$x = 4 \text{ cm} \quad (2)$$

(c) Work out the area of the rectangle.

$$4 \times 17 = 64$$

$$64 \text{ cm}^2 \quad (2)$$

56. Solve the simultaneous equations



$$\begin{array}{r} 3x + 5y = 1 \quad \times 3 \\ 2x - 3y = 7 \quad \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 + 5y = 1 \\ -6 \quad -6 \\ \hline 5y = -5 \\ \div 5 \quad \div 5 \\ \hline y = -1 \end{array}$$

Do not use trial and improvement

57 Days to Go

$$\begin{array}{r} 9x + 15y = 3 \\ \text{Add } 10x - 15y = 35 \\ \hline 19x = 38 \\ \div 19 \quad \div 19 \\ \hline x = 2 \end{array}$$

$$\begin{array}{r} 5y = -5 \\ \div 5 \quad \div 5 \\ \hline y = -1 \end{array}$$

$$4 - (-3) = 7 \quad \checkmark$$

$$x = 2 \quad y = -1 \quad (4)$$

$$(-2)^2 + (-2)$$

$$0^2 + 0 = 0$$

$$3^2 + 3$$
$$9 + 3 = 12$$

57. (a) Complete the table of values for $y = x^2 + x$

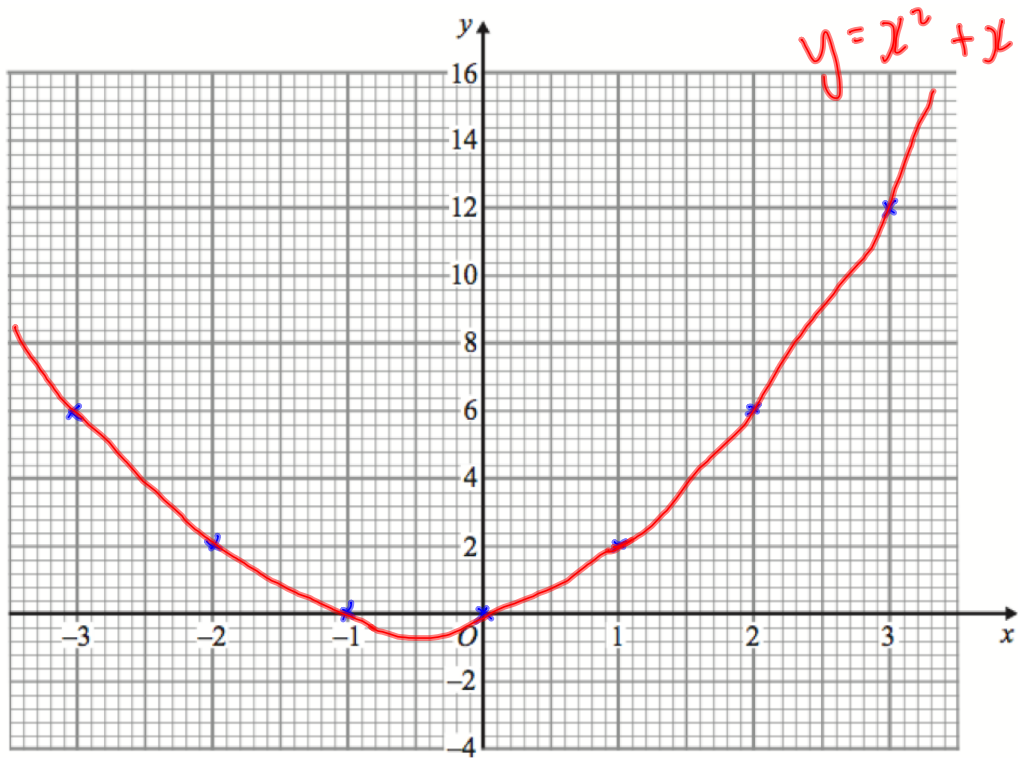


x	-3	-2	-1	0	1	2	3
y	6	2	0	0	2	6	12

(2)

56 Days to Go

(b) On the grid, draw the graph of $y = x^2 + x$ for the values of x from -3 to 3.

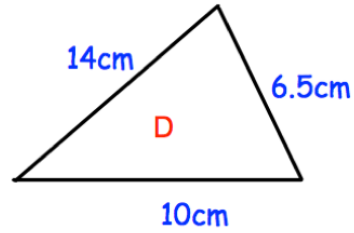
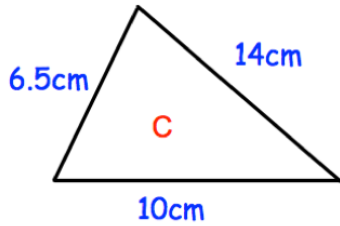


(2)

58. For the pair of triangles below, state the condition why they are congruent.



20 Days to Go

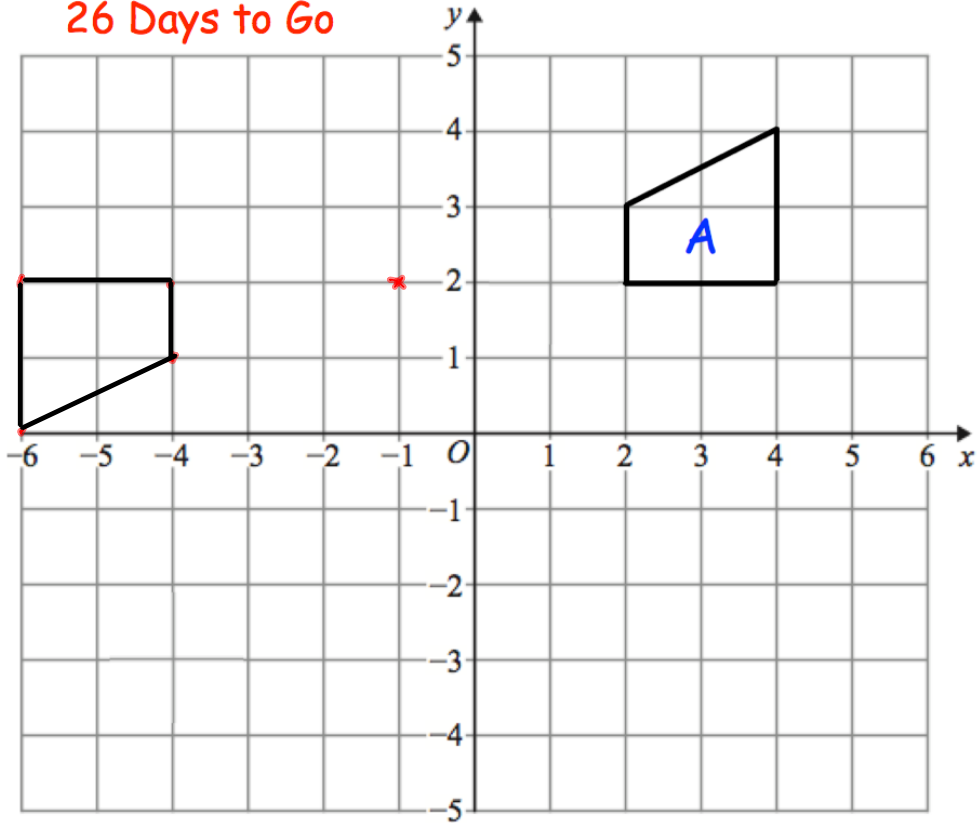


Condition: *SSS*
(1)

59.



26 Days to Go



Rotate shape A 180° about centre (-1, 2)

(3)

60. A large coffee costs £3.20



A medium coffee costs £2.40 $\frac{3}{4}$ of the price of a large coffee.

94 Days to Go

Work out the total cost of 5 large coffees and 2 medium coffees.

$$3.20 \div 4 = 0.80$$

$$0.80 \times 3 = \pounds 2.40$$

$$5 \times \pounds 3.20 = \pounds 16$$

$$2 \times \pounds 2.40 = \pounds 4.80$$

$$\begin{array}{r} \pounds 16 \\ + \pounds 4.80 \\ \hline \pounds 20.80 \\ \hline \end{array}$$

(4)

61. Complete the table.



$$5 \sqrt{\frac{17}{85}}$$

91 Days to Go

Fraction	Decimal	Percentage
$\frac{17}{20}$	0.85	85%
$\frac{3}{25}$	0.12	12%
$\frac{23}{25}$	0.92	92%

25
50
75
100
125
150
175
200
225
250

$$25 \overline{) 23.000} \begin{array}{l} 00.92 \\ \underline{23.000} \end{array}$$

$$\frac{85}{100}$$

$$\frac{17}{20}$$

$$\frac{12}{100}$$

$$\frac{6}{50}$$

$$\frac{3}{25}$$















(4)

62. The number of hours of sunshine on a day, across a number of cities is shown below.



 = 2 hours of sunshine

89 Days to Go

Norwich	      
Dublin	   
Belfast	   
Aberdeen	 
Cardiff	   
Glasgow	    

11
8
7
4
8

- (a) How many more hours of sunshine was there in Norwich than Belfast?

$$11 - 7 = 4$$

.....4.....hours
(1)

In Glasgow there was 9 hours of sunshine.

- (b) Complete the pictogram.

(2)

63. Magnus flips a fair coin once and rolls an ordinary dice once.



- (a) Write down all the possible outcomes.

82 Days to Go

T1 T2 T3 T4 T5 T6
H1 H2 H3 H4 H5 H6

(2)

- (b) Find the probability that Magnus gets a head and a 3.

$$\frac{1}{12}$$

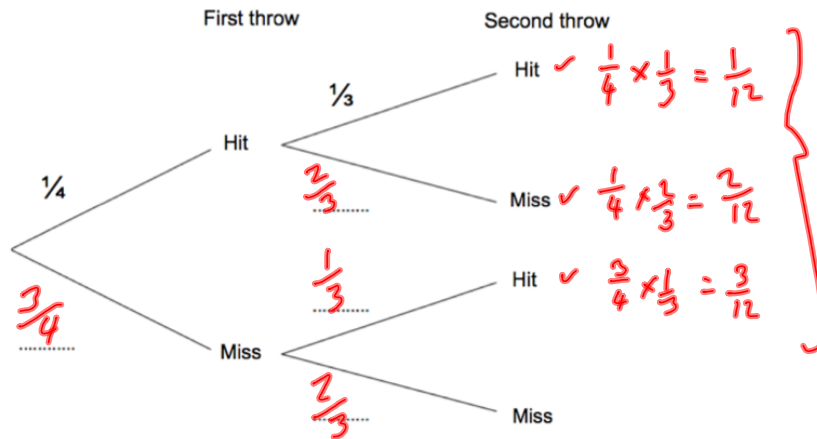
(1)

81 Days to Go

64. Jennifer is playing darts.
 She throws two darts aiming for a Bullseye.

The probability Jennifer hits the Bullseye on her first throw is $\frac{1}{4}$.
 The probability she hits the Bullseye on her second throw $\frac{1}{3}$.

- (a) Complete the tree diagram.



- (b) Work out the probability Jennifer hits the Bullseye at least once.

$$\frac{1}{12} + \frac{2}{12} + \frac{3}{12} = \frac{6}{12} = \frac{1}{2}$$

.....
(2)

- 65.

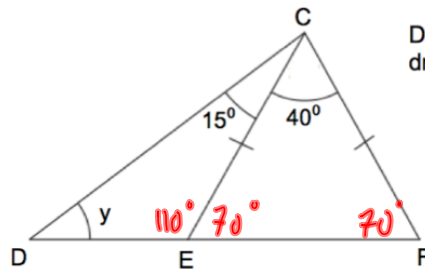


Diagram not drawn accurately

$$180 - 40 = 140$$

$$140 \div 2 = 70$$

- DEF is a straight line.
 CE = CF.
 Angle ECF is 40°
 Angle DCE is 15°

$$180 - 70 = 110$$

80 Days to Go

- Find the size of the angle marked y.

$$110 + 15 = 125$$

$$180 - 125 = 55$$

55

 (4)



75 Days to Go

66. Complete the table below.



	Faces	Edges	Vertices
Cube	6	12	8
Square-based Pyramid	5	8	5
Triangular Prism	5	9	6

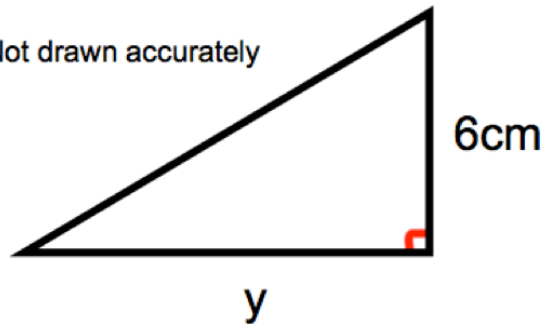


(6)

67. Shown below is a right-angled triangle.



Not drawn accurately



The area of the triangle is 21cm^2
Calculate y , the length of the base.

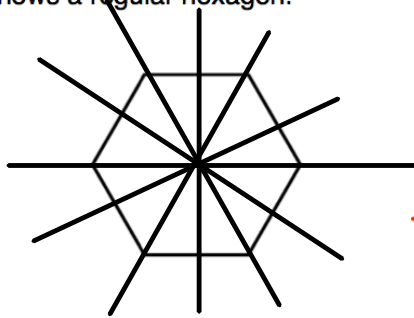
$$21 \times 2 = 42$$

$$42 \div 6 = 7 \text{ cm}$$

74 Days to Go

7
.....cm
(2)

68. The diagram below shows a regular hexagon.



72 Days to Go

(a) Write down the order of rotational symmetry of the hexagon.

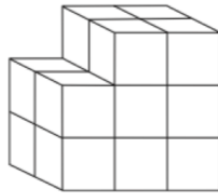
6

(1)

(b) On the diagram draw in all the lines of symmetry.

(2)

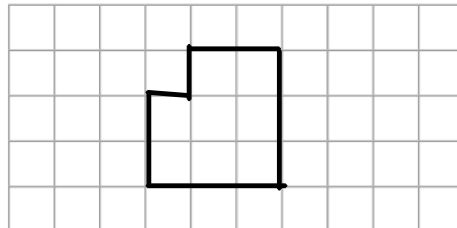
69. The diagram below shows a shape made with centimetre cubes.



71 Days to Go

↑
Front

On the centimetre square grid, draw the front elevation.



(2)

70. A holiday costs £1670



Lorenzo will pay a deposit of £250

He will then pay the rest of the cost in 8 equal monthly payments.

8 Days to Go

Work out the amount of each monthly payment.

$$1670 - 250 = \pounds 1420$$

$$1420 \div 8 = \pounds 177.50$$

£.....
177.50
(3)

71. Shown below is a conversion to change between kilograms and pounds.



10 Days to Go

(a) Using the graph, convert 5 kilograms to pounds.

11
.....pounds
(1)

(b) Using the graph, convert 8 pounds to kilograms.

3.6
.....kilograms
(1)

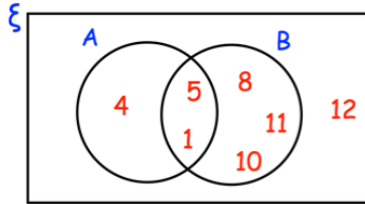
A piano weighs 150 kilograms.

(c) Change 150 kilograms to pounds.

10 kg = 22 pounds
 100 kg = 220 pounds
 50 kg = 110 pounds

330
pounds
 (2)

74. Here is a Venn diagram.



34 Days to Go

A number is chosen at random.

(a) Write down $P(A \cap B)$

$$\frac{2}{7}$$

(2)

(b) Write down $P(A \cup B)$

$$\frac{6}{7}$$

(2)

75. The heights of 7 children are shown below.



$\overset{1.32m}{132cm}$ $1.2m$ $\overset{0.98m}{98cm}$ $0.99m$ $\overset{1.16m}{116cm}$ $1.4m$ $1.33m$
 ✓ ✓ ✓ ✓ ✓ ✓ ✓

(a) Change 132cm into metres.

$$\frac{1.32}{\dots\dots\dots}m$$

(1)

(b) Change 98cm into metres.

$$\frac{0.98}{\dots\dots\dots}m$$

(1)

(c) Order the heights, starting with the shortest.

$\overset{98cm}{\dots\dots\dots}$ $\overset{0.99m}{\dots\dots\dots}$ $\overset{116cm}{\dots\dots\dots}$ $\overset{1.2m}{\dots\dots\dots}$ $\overset{132cm}{\dots\dots\dots}$ $\overset{1.33m}{\dots\dots\dots}$ $\overset{1.4m}{\dots\dots\dots}$
 ✓ ✓ ✓ ✓ ✓ ✓ ✓

(1)

(d) Work out the median.

$$\frac{1.2m}{\dots\dots\dots}$$

(1)

38 Days to Go

76. Here is part of a train timetable.

37 Days to Go



	Departure times			
* Antrim	12:30	13:00	14:00	16:00
Randalstown	12:45	13:15	14:15	16:15
* Ballymena	13:01	13:31	14:31	16:31
Ballycastle	13:39	14:09	15:09	17:09

Freddy wants to travel from Randalstown to Ballycastle.
He arrives at Randalstown at 13:03 to catch the next train to Ballycastle.

(a) How long does this train journey take?

$$45 + 9 = 54$$

54
.....minutes
(2)

Jennifer lives in Antrim and her friend lives in Ballymena.
Jennifer lives a 5 minute walk from Antrim train station.
Her friend lives a 30 minute walk from Ballymena train station.
Jennifer wants to arrive at her friend's house **before** 3pm.
Plan Jennifer's journey to her friend's house.

Jennifer should leave her house before 12:55 and get the 13:00 train from Antrim. She should arrive in Ballymena train station at 13:31. Then after walking, she should arrive at her friend's house at 14:01.

(5)

77. The temperature, in °C, at midnight at a weather station on 5 days was recorded



Day	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature	-4	1	-6	1	-2

42 Days to Go

(a) What fraction of the days had a temperature below 0°C?

$$\frac{3}{5}$$

.....
(1)

(b) What is the range of the temperatures?

$$1 - (-6) = 7$$

..... °C
(1)

78. (a) Make u the subject of the formula



$$v = u + 10t$$

58 Days to Go

$$-10t \quad -10t$$

$$v - 10t = u$$

$$u = \frac{v - 10t}{1}$$

.....
(2)

(b) Make t the subject of the formula

$$v = u + 10t$$

$$-u \quad -u$$

$$v - u = 10t$$

$$\div 10 \quad \div 10$$

$$\frac{v - u}{10} = t$$

$$t = \frac{v - u}{10}$$

.....
(2)