SECTION A

Answer ALL questions.

**In Section A put a cross in one box ☒ to indicate your answer. If you change your mind,
put a line through the box ☒ and then put a cross in another box ☒.
Each question in Section A is worth one mark.**

1   Find the median of   37, 53, 41, 48, 37, 59, 26

37	41	43	48
☒	☒	☒	☒

2   Which decimal is equivalent to $\dfrac{4}{5}$?

0.45	0.8	1.25	4.5
☒	☒	☒	☒

3   This shape is made from a square and a rectangle.
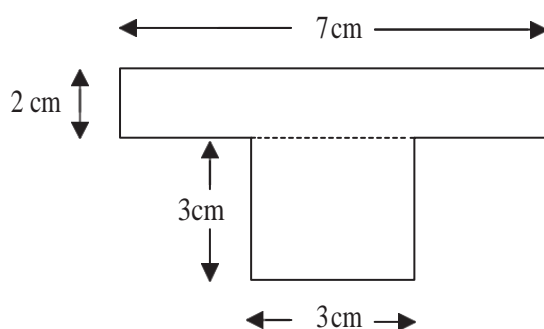
Diagram **NOT** accurately drawn

What is the perimeter of this shape?

15cm	23cm	24cm	30cm
☒	☒	☒	☒

4   Find the value of $3a + 4b$ when $a = 7$ and $b = 5$

19	41	43	82
☒	☒	☒	☒

5 What is the volume of a cube with edge 4cm?

$16cm^3$ ☒ $48cm^3$ ☒ $64cm^3$ ☒ $96cm^3$ ☒

---

6 The area of a shape is $240cm^2$. What is this in mm^2?

$2.4mm^2$ ☒ $24mm^2$ ☒ $2400mm^2$ ☒ $24000mm^2$ ☒

---

7 A group of men and women took a test.

This two-way table shows some information about the test.

	Passed	Failed	TOTAL
Men	43		56
Women			
TOTAL	75		100

How many women failed the test?

12 ☒   13 ☒   25 ☒   32 ☒

---

8 A pie chart is drawn to show the hair colour of 200 pupils in a school. 40 pupils have brown hair.

What angle will the sector for brown hair be on the pie chart?

20° ☒   36° ☒   40° ☒   72° ☒

9 What is 280 as a product of its prime factors?

$1\times2\times2\times2\times5\times7$ ☒

$2\times2\times2\times5\times7$ ☒

$2\times4\times5\times7$ ☒

$2\times2\times3\times5\times7$ ☒

---

10 What is the midpoint of $(4, -6)$ and $(-2, 14)$?

$(1, 4)$ ☒

$(1, 10)$ ☒

$(3, 4)$ ☒

$(3, 10)$ ☒

---

11 What name is given to a straight line that goes from the centre to the circumference of a circle?

Radius ☒

Tangent ☒

Diameter ☒

Chord ☒

---

12 Expand and simplify

$$-12\,(3m - 2) - 10 + 2m$$

$-38m - 14$ ☒

$-34m - 14$ ☒

$-34m + 14$ ☒

$-38m + 14$ ☒

---

13 Round 0.025701009 to 2 decimal places.

0.02 ☒

0.03 ☒

0.025 ☒

0.026 ☒

---

14 Find the value of $(4h + 3)^2$ when $h = 2$

22 ☒

90 ☒

121 ☒

2025 ☒

15 Find the value of

$$3^3 + (8 - 3) \times 4$$

29	47	56	128
☒	☒	☒	☒

16 The frequency table below shows the number of marks scored on a test.

Number of marks	Frequency
0 – 19	31
20 – 39	14
40 – 59	28
60 – 79	27

What is the modal class of the number of marks?

$0-19$	$20-39$	$40-59$	$60-79$
☒	☒	☒	☒

17 What is   1357000000   in standard form?

1.357×10^{-9}	1.357×10^{-6}	1.357×10^{6}	1.357×10^{9}
☒	☒	☒	☒

18 The price of a games console has been reduced by 20% in a sale. The sale price is $360

How much did the games console cost before it was reduced in the sale?

$288	$300	$432	$450
☒	☒	☒	☒

19 What is the nth term of this sequence?

$$4, 16, 36, 64, 100, \ldots$$

$(4n)^2$	$n^2 + 4$	$4n^2$	$12n - 8$
☒	☒	☒	☒

20 Factorise fully

$$28x^2 + 16xy + 8x$$

$x(28x + 16y + 8)$	$2x(14x + 8y + 4)$	$4x(7x + 4y + 2)$	$8x(4x + 2y + 1)$
☒	☒	☒	☒

21 A book is 25cm long to the nearest centimetre. What is the minimum possible length of the book?

24cm	24.5cm	24.95cm	25cm
☒	☒	☒	☒

22 Simplify

$$f^8 \times f^4$$

f^2	f^4	f^{12}	f^{32}
☒	☒	☒	☒

23 One counter is taken at random from a bag.

The probability that the counter is red is $\dfrac{1}{5}$

The probability that the counter is blue is $\dfrac{7}{10}$

The rest of the counters are green.

What is the probability that the counter is green?

$\dfrac{1}{10}$	$\dfrac{7}{15}$	$\dfrac{8}{15}$	$\dfrac{9}{10}$
☒	☒	☒	☒

24 What is the length of the unknown side in this triangle to one decimal place?

13cm

5 cm
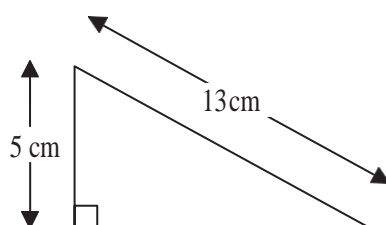
Diagram **NOT** accurately drawn

6.0cm	8.0cm	12.0cm	13.9cm
☒	☒	☒	☒

25 Round 7.1579012 to 3 significant figures.

7.15	7.16	7.157	7.158
☒	☒	☒	☒

26 A regular polygon has exterior angles of 60° What is the sum of the polygon's interior angles?

180°	360°	540°	720°
☒	☒	☒	☒

27 Factorise

$$y^2 - 49$$

$y(y - 7)$	$y(y - 49)$	$(y - 7)(y - 7)$	$(y - 7)(y + 7)$
☒	☒	☒	☒

---

28 The area of a shape is $24\,\text{cm}^2$.

The shape is then enlarged by a scale factor of 3 What is the area of the enlarged shape?

$72\,\text{cm}^2$	$142\,\text{cm}^2$	$216\,\text{cm}^2$	$648\,\text{cm}^2$
☒	☒	☒	☒

---

29 A fair, 6-sided die has faces that are numbered 1, 2, 3, 4, 5 and 6 The die is rolled twice.

What is the probability of getting a 2 on both rolls?

$\dfrac{2}{6}$	$\dfrac{4}{6}$	$\dfrac{1}{36}$	$\dfrac{4}{36}$
☒	☒	☒	☒

---

30 Find the value of $64^{-\frac{2}{3}}$

$\dfrac{1}{16}$	-16	$\dfrac{1}{512}$	-512
☒	☒	☒	☒