This page is meant to be blank.
**P1**

50, 100, 150, 200, 250, ?

Which number comes next in this sequence?

- 251
- 260
- 300
- 350

**P2**

Jim gets paid $10 per hour. He worked for 5 hours. How much did Jim earn?

$ __________

**P3**

$1 = 100 cents

Complete the table.

<table>
<thead>
<tr>
<th>$</th>
<th>cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**P4**

Write a fraction equivalent to one half.

- 
- 

In what direction is the plane at the Airport pointing?
- North-East
- North-West
- South-East
- South-West

Jane bought a packet of 12 cards for $15.00.
The average price of a card is
- $0.80
- $1.25
- $1.80
- $3.00

Two places are 4.7 cm apart on a map.
On the map 1 cm represents 5 km.
What is the actual distance between the two places?
- 1.06 km
- 9.4 km
- 23.5 km
- 47 km
4. The ratio of William’s age to Laura’s age is 3:2. William is 18 years old. How old is Laura?

\[ \frac{3}{2} \]

2 6 12 27

5. The arrow points to a position on the number line. What number is at this position?

\[ \boxed{} \]

6. How many more people live in Bayview than Dunston and Cranbrook combined?

<table>
<thead>
<tr>
<th>Place</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford</td>
<td>4 284 379</td>
</tr>
<tr>
<td>Metville</td>
<td>3 692 592</td>
</tr>
<tr>
<td>Bayview</td>
<td>1 763 132</td>
</tr>
<tr>
<td>Packtown</td>
<td>1 445 078</td>
</tr>
<tr>
<td>Anfield</td>
<td>1 146 119</td>
</tr>
<tr>
<td>Hunter</td>
<td>205 566</td>
</tr>
<tr>
<td>Cranbrook</td>
<td>333 940</td>
</tr>
<tr>
<td>Dunston</td>
<td>14 368</td>
</tr>
</tbody>
</table>

348 308 171 976 1 414 824 1 429 192
7. A farm has 4 paddocks.
Which paddock has the largest area?

\[
\begin{array}{cccc}
100 \text{m} & 150 \text{m} & 80 \text{m} & 125 \text{m} \\
170 \text{m} & 125 \text{m} & 50 \text{m} & 200 \text{m}
\end{array}
\]

8. A water tank has a capacity of 6.25 kilolitres.
How many litres does the water tank hold when it is full?

\[
\begin{array}{cccc}
625 & 6025 & 6250 & 62500
\end{array}
\]

9. A recipe requires \( \frac{3}{4} \) cup of olive oil.
Kay makes double the recipe.
How many cups of olive oil does she use?

\[
\begin{array}{cccc}
\frac{6}{8} & \frac{4}{3} & 1 \frac{1}{4} & 1 \frac{1}{2}
\end{array}
\]

10. What is the size of angle \( \angle ABC \)?
Sam is building a wooden fence that is 4.8 metres long. He is using planks that are all 0.12 metres wide. There are no gaps between the planks.

How should Sam calculate how many planks he will need altogether?

- $4.8 \div 0.12$
- $0.12 \div 4.8$
- $4.8 \times 0.12$
- $4.8 - 0.12$

$45 \times \bullet = 18$

What is the value of $\bullet$?

\[
\begin{array}{cccc}
\frac{2}{5} & \frac{3}{5} & \frac{5}{2} & \frac{5}{3} \\
\text{○} & \text{○} & \text{○} & \text{○}
\end{array}
\]
Opposite faces on a standard die always add up to 7.

Which is a correct net for a standard die?

![Net options](image-url)

What is the value of \( x \)?

- 20
- 60
- 80
- 120

Zoe bought a bike on sale at 15% off the original price. The original price was $420.

How much did Zoe pay for the bike?

- $63
- $357
- $378
- $405
16. Sticks are used to make this pattern of pentagons.

In this pattern the rule for the number of sticks is

- $5 \times \text{number of pentagons}$.
- $4 \times \text{number of pentagons}$.
- $5 \times \text{number of pentagons} - 1$.
- $4 \times \text{number of pentagons} + 1$.

17. When grain falls off a conveyor belt it makes a cone.

The volume, $V$, of the cone is given by the rule $V = \frac{\pi r^2 h}{3}$, where $r$ is the radius of the cone in metres and $h$ is the height in metres.

When $r = 10$ and $h = 5$, the volume of the cone is closest to

- $52 \text{ m}^3$
- $105 \text{ m}^3$
- $268 \text{ m}^3$
- $524 \text{ m}^3$
What is the value of \(y\)?

\[ y = 2x - 1 \]
\[ y = 3x + 2 \]

Which value of \(x\) satisfies both of these equations?

- \(x = -3\)
- \(x = -1\)
- \(x = 1\)
- \(x = 3\)

Which of these are always equal in length?

- the opposite sides of a trapezium
- the opposite sides of a parallelogram
- the diagonals of a trapezium
- the diagonals of a parallelogram

A satellite dish has diameter \(D\) and depth \(d\).

The focal length of the dish, \(f\), is given by the rule \(f = \frac{D^2}{16d}\).

When \(D = 8\) and \(f = 0.4\), the value of \(d\) is

- 0.4
- 0.1
- 2.5
- 10
22

Scale: 1 cm represents 600 m

The distance on the map from A to B along the road is 9 cm.

How long will it take to walk from A to B along the road at a speed of 4 kilometres per hour?

- 1 hour 21 minutes
- 1 hour 35 minutes
- 13 hours 5 minutes
- 13 hours 30 minutes

23

This is a map of the roads Jordan uses to travel to and from school.

The map is to scale.

The total distance he travels each day is 900 metres.

What is the scale of the map?

- 1 unit = 25 m
- 1 unit = 35 m
- 1 unit = 45 m
- 1 unit = 50 m
**24**

The daily energy requirement, \( E \) (kilojoules), for a person of mass \( m \) (kilograms) is calculated using the rule \( E = 9m + 8100 \).

For Gavin, \( E = 8865 \).

What is Gavin’s mass? \[ \text{kilograms} \]

**25**

A corner table has the shape of a quarter circle.

The two straight sides are each 50 cm long.

The curved distance from \( A \) to \( B \) is closest to

- 50 cm
- 60 cm
- 70 cm
- 80 cm

**26**

What is the value of \( 2 + 5x - x^2 \) when \( x = -2 \)?

- \(-12\)
- \(-4\)
- \(8\)
- \(16\)
27. In the figure below, the lines $m$ and $n$ are parallel.

\[ m \quad \begin{array}{c} \text{45°} \\ a^\circ \end{array} \quad n \quad \begin{array}{c} \text{25°} \end{array} \]

(not to scale)

What is the value of $a$?

28. After 15 games, Ben’s average (mean) number of points per game was 17.
After 20 games his average had increased to 21.

What was his average number of points per game in the last 5 games?

\[
\text{points per game}
\]

29. In a class of 21 students, the ratio of boys to girls is 4:3.
Three extra boys and one extra girl join the class.

What is the new ratio of boys to girls?

\[
:\quad :\quad :
\]

30. \[ \frac{2}{7} > \frac{3}{x} \] where $x$ is a positive whole number.

What is the smallest possible value for $x$?

31. Write 2009 as a product of its prime factors.

END OF TEST