0:40 SESSION 2
Time available for students to complete test: 40 minutes

Use 2B or HB pencil only
1. At 6 am the temperature in Greenville was 11.9°C. At midday it was 9.8°C warmer. At 6 pm it was 10.9°C cooler than at midday. What was the temperature at 6 pm?

- 8.8°C
- 10.8°C
- 13.0°C
- 32.6°C

2. If \( w = 6 \), what is the value of \( 2w \)?

- 12
- 26
- 36
- 62

3. A shop sells new and used computers. The graph shows the price of 2 similar computers and their age in years.

Which one of these statements is true?

- Computer B is older and less expensive than computer A.
- Computer A is newer and less expensive than computer B.
- Computer A is older and more expensive than computer B.
- Computer B is newer and more expensive than computer A.
4. This table summarises the time Mick spent walking his dog over five days.

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Tuesday</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Wednesday</td>
<td>1 hour</td>
</tr>
<tr>
<td>Thursday</td>
<td>62 minutes</td>
</tr>
<tr>
<td>Friday</td>
<td>43 minutes</td>
</tr>
</tbody>
</table>

What was the average (mean) time for these walks?

40 minutes  52 minutes  65 minutes  260 minutes

5. Which number is exactly halfway between $1\frac{1}{4}$ and $3\frac{3}{4}$?

- $1\frac{1}{2}$
- 2
- $2\frac{1}{2}$
- $2\frac{3}{4}$

6. This is a triangular prism.

Which diagram is the net of a triangular prism?

- Diagram 1
- Diagram 2
- Diagram 3
- Diagram 4
7. Which dotted line is a line of symmetry?

8. If $x = 3$, what is the value of $\frac{4x}{2x - 2}$?

9. There were only 14 students in Rina’s class on Wednesday. The other 11 were absent. What percentage of Rina’s class was absent?

10. Here is a map of Grit Island.

Which one of these points is on Grit Island?

- $(6, \ 2 \frac{1}{2})$
- $(1, \ 6 \frac{1}{2})$
- $(4 \frac{1}{2}, \ 1)$
- $(3 \frac{1}{2}, \ 5)$
Lyn uses a photocopier to enlarge this picture.

The enlarged picture is 3 times as long and 3 times as wide as the original.

The area of the enlarged picture is

- 3 times the area of the original.
- 6 times the area of the original.
- 9 times the area of the original.
- 24 times the area of the original.

Here is a table of values for $x$ and $y$.

<table>
<thead>
<tr>
<th>$x$</th>
<th>0</th>
<th>0.5</th>
<th>1</th>
<th>1.5</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$</td>
<td>0</td>
<td>0.5</td>
<td>2</td>
<td>4.5</td>
<td>8</td>
</tr>
</tbody>
</table>

Which of these is a correct rule for $y$ in terms of $x$?

- $y = x$
- $y = 2x$
- $y = 3x$
- $y = 2x^2$

In the diagram, $ACD$ is a straight line.

What is the size of angle $BCE$?

- $20^\circ$
- $48^\circ$
- $75^\circ$
- $85^\circ$
Mira made this table showing population data over two years for the six Australian states.

Some data for South Australia is not shown.

<table>
<thead>
<tr>
<th>Population of Australian States</th>
<th>2002 Population</th>
<th>2003 Population</th>
<th>Percentage increase from previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>6,662,212</td>
<td>6,716,277</td>
<td>0.8%</td>
</tr>
<tr>
<td>VIC</td>
<td>4,884,952</td>
<td>4,947,985</td>
<td>1.3%</td>
</tr>
<tr>
<td>QLD</td>
<td>3,754,154</td>
<td>3,840,111</td>
<td>2.3%</td>
</tr>
<tr>
<td>SA</td>
<td>1,522,475</td>
<td></td>
<td>0.6%</td>
</tr>
<tr>
<td>WA</td>
<td>1,936,902</td>
<td>1,969,046</td>
<td>1.7%</td>
</tr>
<tr>
<td>TAS</td>
<td>474,305</td>
<td>479,958</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

What was the population of South Australia (SA) closest to in 2003?

- 2,537,500
- 2,436,000
- 1,613,800
- 1,531,600

The diameter of a circular table top is 2.6 metres.

What is its circumference to the nearest metre?

- 4 m
- 5 m
- 8 m
- 16 m

An equilateral triangle, a square and a regular pentagon meet at point $B$.

What is the size of the obtuse angle $CBA$?

- $102^\circ$
- $108^\circ$
- $112^\circ$
- $120^\circ$
Here is a plan of Jim’s backyard.

![Diagram of a yard plan with shaded areas for paving and garden]

The area of the square garden in the middle is $16 \text{ m}^2$.

What is the area of the paving in Jim’s backyard?

- $20 \text{ m}^2$
- $32 \text{ m}^2$
- $128 \text{ m}^2$
- $144 \text{ m}^2$

A rule for $y$ in terms of $x$ is $y = 6 - 4x$.

When $x = 3.75$ the value of $y$ is

- $-9$
- $-1.75$
- $7.5$
- $9$

How many hours and minutes are between 2:27 am and 2:16 pm on the same day?

- 11 hours and 11 minutes
- 11 hours and 49 minutes
- 12 hours and 11 minutes
- 12 hours and 49 minutes

Which one of these is a right-angled isosceles triangle?

- Not to scale
- 70°
- 45°
- 45°
- 100°
21. A stack of 4 cups is 20 cm tall. A stack of 6 cups is 26 cm tall.

Which rule can be used to work out the height, in centimetres, of a stack of \( n \) cups?

\[
\begin{align*}
6n - 10 & \\
6n - 4 & \\
3n + 11 & \\
3n + 8 &
\end{align*}
\]

22. Gina needs to travel by train for 22 days during May.
A daily ticket will cost her $6.60 and a monthly ticket will cost her $105.60.

What is her average daily saving if Gina buys a monthly ticket?

$1.80 \quad $4.80 \quad $39.60 \quad $99.00

23. Kim uses this rule to work out the next number in a pattern.

**Multiply by 7 and then add 1.**

The first three numbers of his pattern are: 8, 57, 400, ...

What is the fifth number in his pattern?

24. The amount of energy, \( E \) units, used by an air-conditioner for temperatures in the range 20°C to 30°C is given by the rule

\[ E = 2T^2 \text{ where } T \text{ is the temperature in } ^\circ\text{C}. \]

How many units of energy are used when the temperature is 25°C? ______ units
25 Joe is 1.6 m tall. His shadow is 2 m long when he stands 3 m from the base of a floodlight.

What is the height of the floodlight?

- 2.4 m
- 2.6 m
- 4.0 m
- 4.2 m

26 This is a map of mountains in a national park.

Anna is at the Lookout facing South. She turns 225° in a clockwise direction.

Which mountain is Anna now facing?

- Mt Helen
- Mt Blanc
- Mt Flinders
- Mt Hope
Sue drew this plan of a square block of land. All measurements are given in metres.

The area of the lawn in square metres is

\[ x^2 - 6 \quad x^2 + 6 \quad 2x^2 - 5 \quad 2x^2 - 6 \]

Shade one bubble.

There are 420 girls and boys at a concert. The ratio of girls to boys at the concert is 3 to 7.

How many girls are at the concert?

126 \quad 140 \quad 180 \quad 294

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This is a diagram of the course for a 10 km road race. The runners start and finish at the Gate.

What is the distance between the Gate and the Junction? \[ \text{km} \]
30. This solid triangular prism needs all its faces painted. The area of each triangular face is $3 \text{ m}^2$.

What is the total area to be painted? \[ \boxed{ } \text{ m}^2 \]

31. The cost in dollars to print $n$ books is $500 + 10n$.

How many books are printed for a cost of $15000$? \[ \boxed{ } \text{ books} \]

32. This list shows the number of films that nine members of a film club watched in April.

| Number of films watched | 0, 1, 2, 2, 3, 4, 5, 5, 5 |

Which of the following is true for this data?

- [ ] mean > median = mode
- [ ] mean < median < mode
- [ ] mean = median = mode
- [ ] mean = median < mode

END OF TEST
How many dolphins are shown on this card?

3  4  5  6

6 + 4 = __________

What is the total cost of these two stamps?

$1.50  $2.00

$ __________