1 Write the number sixteen thousand and thirty-seven in figures.

2 Write down the six factors of 28.

3 Write 9876 correct to the nearest thousand.

4 The pictogram shows the number of different coloured cars a garage sells in a month.

<table>
<thead>
<tr>
<th>Colour</th>
<th>Pictogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>![Yellow Pictogram]</td>
</tr>
<tr>
<td>Red</td>
<td>![Red Pictogram]</td>
</tr>
<tr>
<td>White</td>
<td>![White Pictogram]</td>
</tr>
<tr>
<td>Silver</td>
<td>![Silver Pictogram]</td>
</tr>
</tbody>
</table>

Key: $\begin{array}{c} \text{Pictogram} \\ \text{= 12 cars} \end{array}$

Work out how many more white cars than red cars the garage sells.

...
5 Write down the reciprocal of $\frac{5}{6}$.


6 This is Edha’s method to work out $99 \times 27$ without using a calculator.

$\begin{align*}
99 \times 27 &= 100 \times 27 - 27 \\
&= 2700 - 27 \\
&= 2673
\end{align*}$

Show how to use Edha’s method to work out $99 \times 68$ without using a calculator.


7 (a) Write 5.26 pm using the 24-hour clock.

................. [1]

(b) A journey starts at 21 15 one day and ends at 04 33 the next day.

Calculate the time taken, in hours and minutes.

............. h ............ min [1]

(c) Change 10 260 seconds into hours.

.......................... hours [2]
8 (a) 

Measure the marked angle.

........................................................................  [1]

(b) 

Using a ruler and compasses only, construct this triangle. Leave in your construction arcs. The side of length 12 cm has been drawn for you.
9 Put one pair of brackets into this calculation to make it correct.

\[ 150 - 17 - 5 \times 2^2 = 33 \]

[1]

10 Work out \( \sqrt{3} \times 6^2 \).
Give your answer correct to 2 decimal places.

\[ \................................................. ] [2] \]

11 Joe thinks of a positive number, \( n \).
He squares \( n \), then adds it to \(-24\).
The answer is 25.

Work out \( n \).

\[ n = \................................................ \] [2]

12 Indrani and Jagad share some money in the ratio \( \text{Indrani : Jagad} = 7 : 9 \).

Calculate the percentage of the money that Indrani receives.

\[ \............................................. \% \] [2]
13 The equation of a line is \( y = 5x + 7 \).

(a) Write down the gradient of this line.

.................................................  [1]

(b) (i) Find the coordinates of the point where this line crosses the \( y \)-axis.

( ................. , ................. )  [1]

(ii) Find the coordinates of the point where this line crosses the \( x \)-axis.

( ................. , ................. )  [2]

14 On the grid, draw the image of

(a) triangle \( A \) after a reflection in the \( y \)-axis,  [1]

(b) triangle \( A \) after a translation by the vector \( \begin{pmatrix} -3 \\ -4 \end{pmatrix} \).  [2]
15 Write 0.0001 as a power of 10.

.................................................  [1]

16 As the temperature increases, people eat more ice cream.

What type of correlation does this statement describe?

.................................................  [1]

17 Sanjay invests $700 in an account paying simple interest at a rate of 2.5% per year.

Calculate the value of his investment at the end of 6 years.

$ .................................................  [3]

18 These are the first four terms of a sequence.

1  23  45  67

(a) Write down the next two terms.

............... , ...................  [2]

(b) Find the \( n \)th term.

.................................................  [2]
19 Simplify.

(a) \(5f + 7g - 8f + 2g\)

(b) \(h^2 \times h^5\)

(c) \(\sqrt{16x^2} \times 5y^0\)


20 Balavan has \(n\) marbles.

He gives his sister \(\frac{n}{5}\) marbles.

He gives his cousin \(\frac{n}{2}\) marbles.

Write an expression, in terms of \(n\), for the number of marbles that Balavan has now.
Give your answer in its simplest form.
21 (a) Use set notation to describe the shaded region.

.................................................  [1]

(b) Find $n(C)$.

.................................................  [1]
22 **Without using a calculator**, work out $2\frac{1}{3} \times \frac{11}{14}$.
You must show all your working and give your answer as a mixed number in its simplest form.

\[ \text{................................................. } \ [3] \]

23 (a) Expand and simplify.
\[ (x + 3)(x - 5) \]

\[ \text{................................................. } \ [2] \]

(b) Renuka’s teacher asks her to factorise completely $8x^2 - 12x$.
Renuka writes $2x(4x - 6)$ as her answer.

Explain why she does not score full marks and give the correct answer.

Reason .............................................................................................................................................

Correct answer ...........................................  \[2\]
24 Udita thinks of two whole numbers. Both numbers are greater than 6. The lowest common multiple (LCM) of the two numbers is 90. The highest common factor (HCF) of the two numbers is 6.

Find the two numbers.

......................... and ........................... [2]