

- 1 The ferry from Helsinki to Travemunde leaves Helsinki at 17 30 on a Tuesday. The journey takes 28 hours 45 minutes.

For
Examiner's
Use

Work out the day and time that the ferry arrives in Travemunde.

$$\begin{array}{r}
 17.30 \\
 + 28.45 \\
 \hline
 45.75 \\
 = 46.15
 \end{array}
 \qquad
 \begin{array}{r}
 46.15 \\
 - 24.00 \\
 \hline
 22.15 \rightarrow \text{Wednesday}
 \end{array}$$

Answer Day Wednesday Time 22.15 [2]

2

TRIGONOMETRY

From the above word, write down the letters which have

- (a) exactly two lines of symmetry,

Answer(a) I [1]

- (b) rotational symmetry of order 2.

Answer(b) I, N [1]

- 3 For this question, $1 < x < 2$.

Write the following in order of size, **smallest** first.

$$\begin{array}{l}
 \text{let } x = 1.5 \\
 \frac{5}{x} = 3.33... \\
 5(1.5) = 7.5 \\
 \frac{x}{5} = 0.3 \\
 1.5 - 5 = -3.5 \\
 x - 5
 \end{array}$$

Answer $x - 5$ < $\frac{x}{5}$ < $\frac{5}{x}$ < $5x$ [2]

4

$$1\frac{1}{2} + \frac{1}{3} + \frac{1}{4} = \frac{p}{12}$$

Work out the value of p .

$$\frac{3}{2} + \frac{1}{3} + \frac{1}{4} = \frac{p}{12}$$

Show all your working.

$$\frac{3 \times 6}{2 \times 6} + \frac{1 \times 4}{3 \times 4} + \frac{1 \times 3}{4 \times 3} = \frac{p}{12}$$

$$\frac{18}{12} + \frac{4}{12} + \frac{3}{12} = \frac{p}{12}$$

$$\frac{25}{12} = \frac{p}{12}$$

$$p = 25$$

Answer $p =$ 25 [2]