June 22nd

5-a-day

<table>
<thead>
<tr>
<th>Nottingham</th>
<th>Manchester</th>
<th>Liverpool</th>
<th>Glasgow</th>
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</thead>
<tbody>
<tr>
<td>101</td>
<td>158</td>
<td>346</td>
<td>348</td>
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</tbody>
</table>

What is the distance between Manchester and Glasgow?

346 miles

Write down the names of the two cities which are least distance apart?

Manchester & Liverpool

This is the net for which solid?

Cylinder

Simplify

$$3f + 2g - f + 5g$$

$$2f + 7g$$

Draw all the lines of symmetry on the pentagon.

What is the order of rotational symmetry?

5
### 5-a-day

#### June 22

**Write 50 as a product of primes, in index form.**

\[ 2 \times 5 \times 5 \]

**Calculate the area of the shape.**

\[ 2600 \text{ m}^2 \]

![Image of a shape with dimensions 10m x 30m and 80m x 30m]

**Enlarge the rectangle, by scale factor 2 from the centre of enlargement (0,0).**

![Graph showing enlargement of a rectangle]

**Calculate the length of PR**

\[ \begin{align*}
50^2 + b^2 &= 100^2 \\
2500 + b^2 &= 10000 \\
b^2 &= 7500 \\
b &= \sqrt{7500} \\
b &= 86.6 \text{ cm}
\end{align*} \]
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<th>June 22</th>
<th>5-a-day</th>
<th>Higher</th>
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<tbody>
<tr>
<td>The rope on a roll is 4½ m long.</td>
<td>$10 \times \frac{13}{8} = \frac{130}{8} = \frac{65}{4}$</td>
<td></td>
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<tr>
<td>Jenny wants 10 pieces of rope 1½ m long.</td>
<td>$65 \div \frac{9}{4} = 65 \times \frac{4}{9} = \frac{260}{9}$</td>
<td></td>
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<tr>
<td>How many rolls of rope are needed?</td>
<td>$3 \frac{11}{18} \rightarrow 4\text{ rolls}$</td>
<td></td>
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</table>

Solve

$$x^2 + 5x + 4 = 0$$

$$(x + 4)(x + 1) = 0$$

$x = -4$ or $x = -1$

Work out

$$4^0 = 1$$

Evaluate

$$27^{\frac{2}{3}} = 9$$

Simplify

$$2\sqrt{2} \times 3\sqrt{18}$$

$$6 \sqrt{36}$$

$$6 \times 6 = 36$$

What is the reciprocal of 2.5454545454...?

$$x = 2.5454...$$

$\text{Reciprocal} \rightarrow \frac{99}{252} = \frac{11}{28}$$