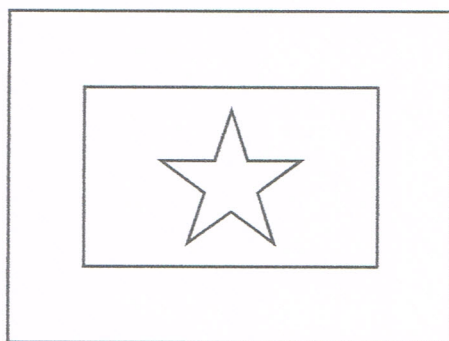


1

For
Examiner's
Use

For the **diagram**, write down

(a) the order of rotational symmetry,

Answer(a) 1 [1]

(b) the number of lines of symmetry.

Answer(b) 1 [1]

2 Calculate $3\sin 120^\circ - 4(\sin 120^\circ)^3$.

$$\begin{aligned}
 &= 3\left(\frac{1}{2}\sqrt{3}\right) - 4\left(\frac{1}{2}\sqrt{3}\right)^3 \\
 &= \frac{3}{2}\sqrt{3} - 4\left(\frac{1}{8} \cdot 3\sqrt{3}\right) \\
 &= \frac{3}{2}\sqrt{3} - \frac{3}{2}\sqrt{3} \\
 &= 0
 \end{aligned}$$

Answer 0 [2]

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

$$\frac{2}{\sqrt{3}} = 1.1547\dots$$

$$2 - \sqrt{3} = 0.2679\dots$$

$$\sqrt{3} = 1.7320\dots$$

$$2 - \frac{\sqrt{3}}{2} = 1.1339\dots$$

Answer $2 - \sqrt{3}$ < $2 - \frac{\sqrt{3}}{2}$ < $\frac{2}{\sqrt{3}}$ < $\sqrt{3}$ [2]