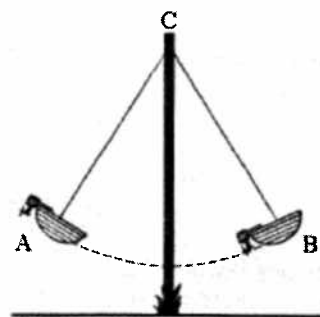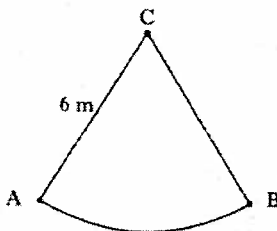1. The boat on a carnival ride travels along an arc of a circle, centre C.

The boat is attached to C
by a rod 6 metres long.

The rod swings from position CA
to position CB.

The length of the arc AB is 7 metres.

Find the angle through which the
rod swings from position A to position B.

6 m

C

A          B

C

A          B

(4)

2. Express $\frac{3}{\sqrt{5}}$ as a fraction with a rational denominator. (2)

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N5   Spot Test 5

1.

$$\frac{x}{360} \times \pi \times d = Arc \checkmark$$

$$\frac{x}{360} \times \pi \times 12 = 7 \checkmark$$

$$\frac{x}{360} = \frac{7}{12\pi}$$

$$x = \frac{360 \times 7}{12\pi} \checkmark$$

$$= 66.84507 61$$

$$= 66.8° \text{ (to 1dp)} \checkmark$$

2.

$$\frac{3}{\sqrt{5}} \times \frac{\sqrt{5}}{\sqrt{5}} \checkmark$$

$$= \frac{3\sqrt{5}}{5} \checkmark$$