

Arc Length-Sector Area

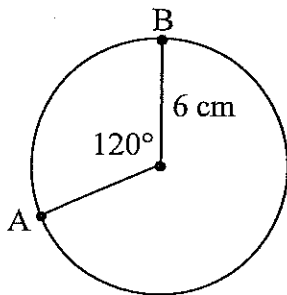
Name: _____

Wells Worksheet (W2)

Date: _____

Block: _____

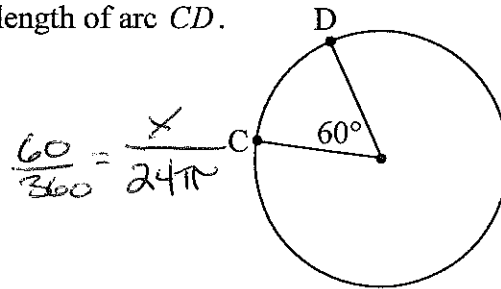
1. Find the length of arc AB .



$$\frac{120}{360} = \frac{x}{12\pi}$$

Arc: 4π cm

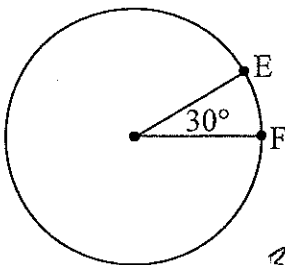
2. The diameter is 24 cm. Find the length of arc CD .



$$\frac{60}{360} = \frac{x}{24\pi}$$

Arc: 4π cm

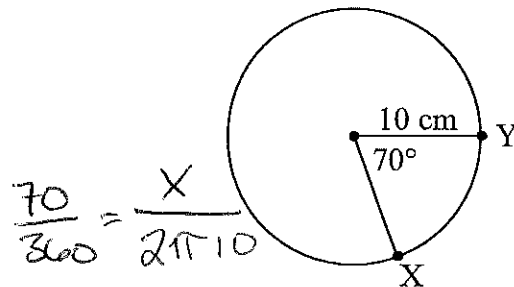
3. The length of arc EF is 5π in. Find the length of the radius.



$$\frac{30}{360} = \frac{5\pi}{2\pi r}$$

Radius: 30 in

4. Find the length of arc XY .



$$\frac{70}{360} = \frac{x}{2\pi \cdot 10}$$

Arc: 3.89π cm

5. A circle has an arc whose measure is 80° and whose length is 88π . What is the diameter of the circle?

$$\frac{80}{360} = \frac{88\pi}{\pi d} \quad \boxed{d = 396 \text{ units}}$$

6. A circle has a circumference whose length is 25π . Find the length of an arc whose central angle is 90° .

$$\frac{90}{360} = \frac{x}{25\pi} \quad \boxed{6.25 \text{ units}}$$

7. Find the measure of the central angle of an arc if its length is 14π and the radius is 18.

$$\frac{x}{360} = \frac{14\pi}{2\pi \cdot 18} \quad \boxed{x = 140^\circ}$$