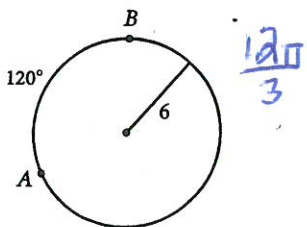


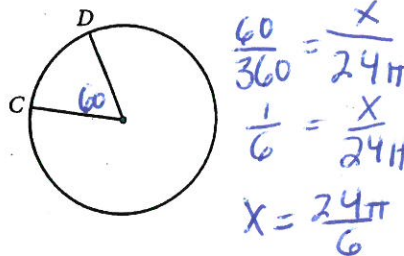
Name _____ Period _____ Date _____

In Exercises 1-10, leave your answers in terms of π .

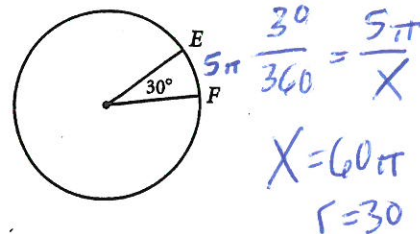
1. Length of $\widehat{AB} = 4\pi$



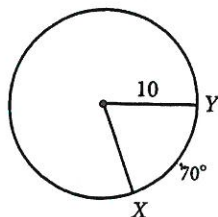
2. The circumference is 24π and $m\widehat{CD} = 60^\circ$. Length of $\widehat{CD} = 4\pi$



3. The length of \widehat{EF} is 5π . Radius = 30



4. Length of $\widehat{XY} = \frac{35\pi}{9}$

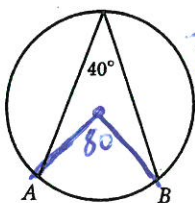


$$\frac{70}{360} = \frac{X}{20\pi}$$

$$\frac{140\pi}{36} = \frac{36X}{36}$$

$$\frac{35\pi}{9} = X$$

5. The radius is 20. Length of $\widehat{AB} = \frac{80\pi}{9}$

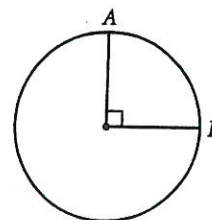


$$\frac{40}{360} = \frac{X}{40\pi}$$

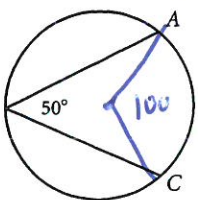
$$\frac{2}{9} = \frac{X}{40\pi}$$

$$X = \frac{80\pi}{9}$$

6. The circumference is 25π . Length of $\widehat{AB} = \frac{25\pi}{4}$



7. The diameter is 40. Length of $\widehat{AC} = \frac{100\pi}{9}$

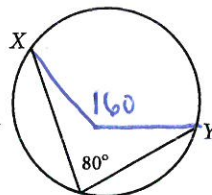


$$\frac{50}{360} = \frac{X}{40\pi}$$

$$\frac{5}{18} = \frac{X}{40\pi}$$

$$\frac{100\pi}{9} \leftarrow \frac{200\pi = 18X}{18}$$

8. The length of \widehat{XY} is 14π . Diameter = $\frac{63}{2}$



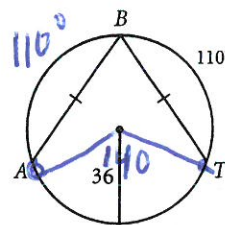
$$\frac{80}{360} = \frac{14\pi}{C}$$

$$\frac{4}{9} = \frac{14\pi}{C}$$

$$126\pi = 4C \rightarrow C = \frac{126\pi}{4}$$

$$C = \frac{63\pi}{2}$$

9. Length of $\widehat{AB} = 28\pi$



$$\frac{110}{360} = \frac{X}{72\pi}$$

$$\frac{11}{36} = \frac{X}{72\pi}$$

$$X = 28\pi$$

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

$$\frac{80}{360} = \frac{88\pi}{X}$$

$$\frac{2}{9} = \frac{88\pi}{X}$$

$$C = 396\pi$$

$$D = 396$$