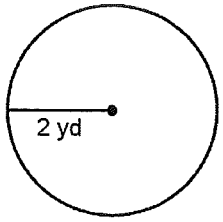
ch 11, #1 Key

Ch. 11: HW #1 Give all decimal approximations to the nearest hundredth.

1) Find the circumference of each. $C = 2\pi r$

a)

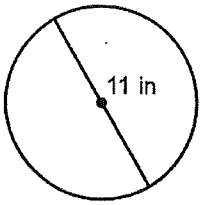


$C = 2\pi 2$

$C = 4\pi$

$C \approx 12.57$ yd

b)



$C = \pi d$

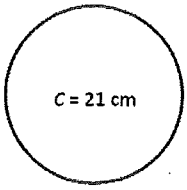
$C = \pi 11$

$C = 11\pi$

$C \approx 34.56$ in

2) Find the radius: $C = 2\pi r$

a)



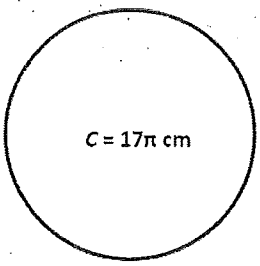
$21 = 2\pi r$

$\frac{21}{2\pi} = r$

$r = \frac{21}{2\pi}$

$r \approx 3.34$ cm

b)



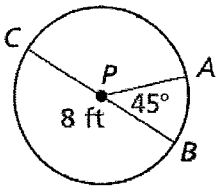
$17\pi = 2\pi r$

$\frac{17}{2} = r$

$r = 8.5$ cm

$r = 8.5$ cm

3) Find the measure and ***length*** of $\overset{\frown}{AB}$



$= \frac{45}{360} \cdot \pi d$

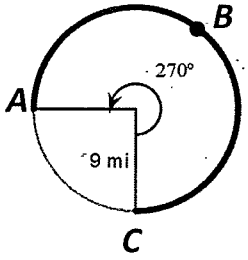
$\frac{1}{8} \cdot \pi \cdot 8$

$m\overset{\frown}{AB} = 45°$

length $\overset{\frown}{AB} = \pi$

length $\overset{\frown}{AB} \approx 3.14$ ft.

4) Find the ***length*** of $\overset{\frown}{ABC}$



$= \frac{270}{360} \cdot 2\pi 9$

$\frac{3}{4} \cdot 18\pi$

length $\overset{\frown}{ABC} = \frac{27\pi}{2}$

length $\overset{\frown}{ABC} \approx 42.41$ mi.

5) Find the exact simplified form and the decimal approximations for each.

a) $x = \frac{2}{3}(6\pi) + \pi(3)^2$

$x = 4\pi + 9\pi = 13\pi$

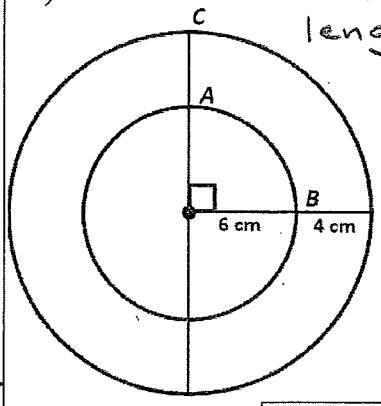
≈ 40.84

b) $x = \frac{4}{1}\left(\frac{3\pi}{8}\right) + \frac{5}{1}\left(\frac{7\pi}{10}\right)$

$x = \frac{3\pi}{2} + \frac{7\pi}{2} = \frac{10\pi}{2} = 5\pi$

$x \approx 15.71$

6) Find the indicated values.



length $\overset{\frown}{AB} = \frac{90}{360} \cdot 2\pi 6$

$= \frac{1}{4} \cdot \frac{12\pi}{1} = 3\pi$

length $\overset{\frown}{CD} = \frac{1}{4} \cdot \frac{2\pi 10}{1}$

$= \frac{1}{4} \cdot \frac{20\pi}{1} = 5\pi$

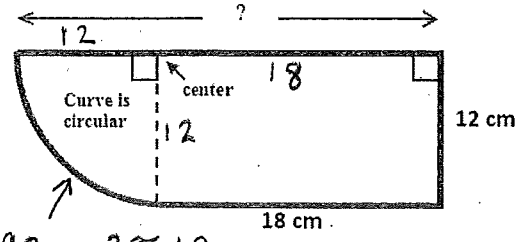
$m\overset{\frown}{AB} = 90°$

$m\overset{\frown}{CD} = 90°$

length $\overset{\frown}{AB} = 3\pi$ cm

length $\overset{\frown}{CD} = 5\pi$ cm

7) Find the perimeter.

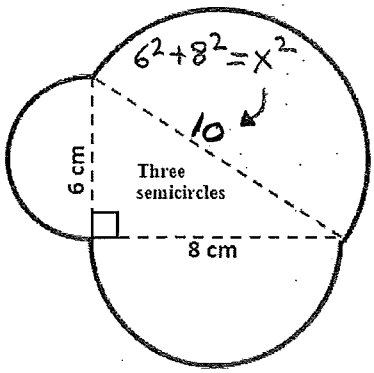


$\frac{90}{360} \cdot 2\pi 12$

$= \frac{1}{4} \cdot \frac{24\pi}{1}$

$\frac{\pi}{6} + 60 \approx 60.52$ cm

8) Find the perimeter.



$\frac{1}{2} \cdot \frac{\pi \cdot 6}{1} = 3\pi$

$\frac{1}{2} \cdot \frac{\pi 8}{1} = 4\pi$

$\frac{1}{2} \cdot \frac{\pi 10}{1} = 5\pi$

$P = 12\pi$

≈ 37.70 cm