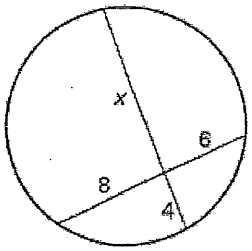
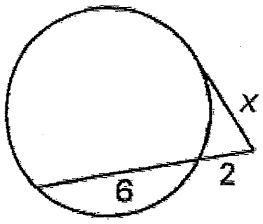
CCGPS Analytic Geometry **6.6-6.7 Quiz Review**

Find the value of x

1.



2.



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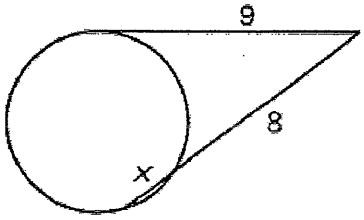
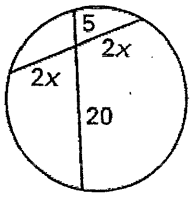
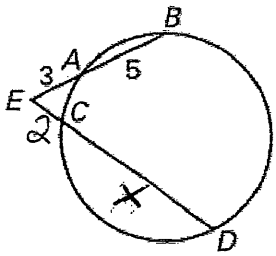


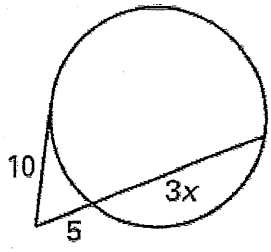
4.



5.



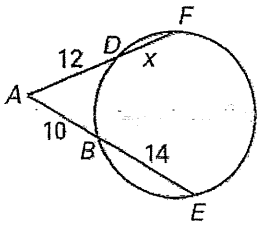
6.



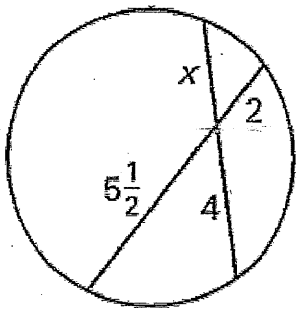
7.

Use the diagram to find the value of x.

Ⓐ 8
Ⓑ 12
Ⓒ 14
Ⓓ 10
Ⓔ 16

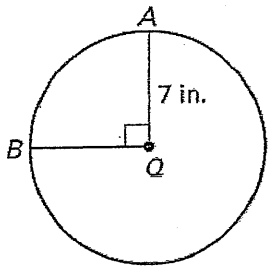


8.

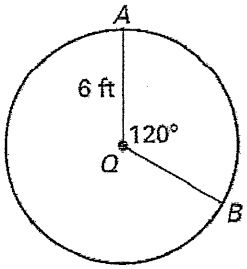


Find the length of $\widehat{AB}$

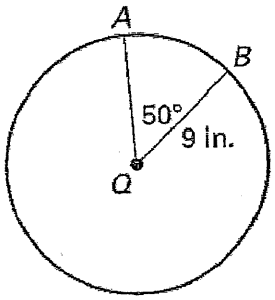
9.



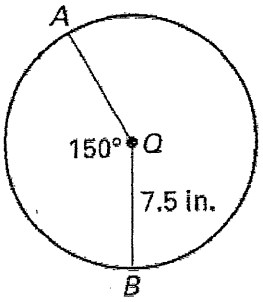
10.



11.

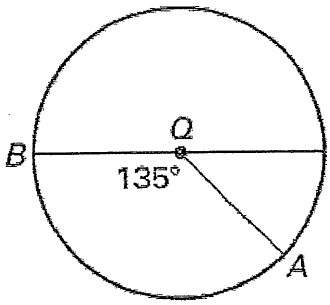


12.



13. Find the indicated measure:

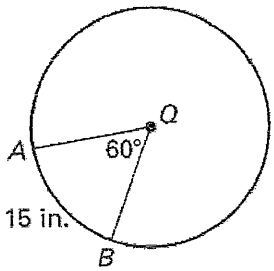
Length of $\widehat{AB}$



$d = 20$ cm

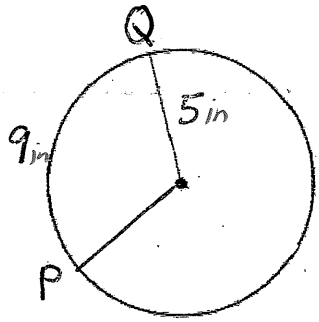
14. Find the indicated measure:

Circumference



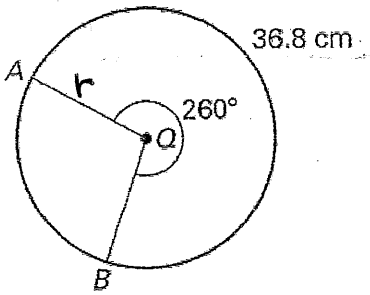
15. Find the indicated measure:

Find $m\widehat{PQ}$



16. Find the indicated measure:

Radius

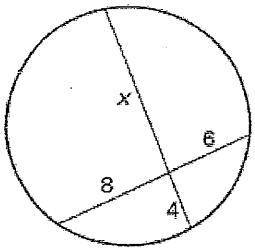


CCGPS Analytic Geometry **6.6-6.7 Quiz Review**

Solutions

Find the value of x

1.

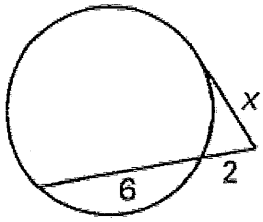


$4(x) = 8(6)$

$4x = 48$

$\boxed{x = 12}$

2.



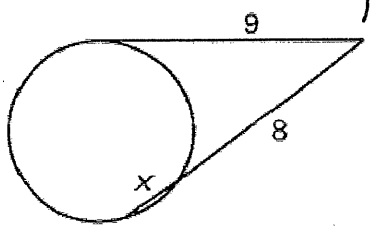
$x(x) = 2(2+6)$

$x^2 = 2(8)$

$x^2 = 16$

$\boxed{x = 4}$

3.



$9(9) = 8(x+8)$

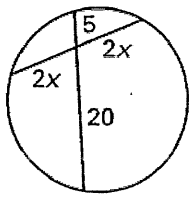
$81 = 8x + 64$

$17 = 8x$

$\frac{17}{8} = x$

$\boxed{x = 2.1}$

4.



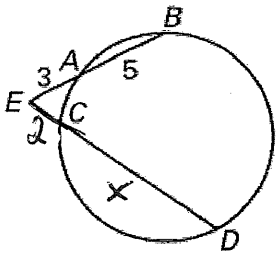
$(2x)(2x) = 5(20)$

$4x^2 = 100$

$x^2 = 25$

$\boxed{x = 5}$

5.



$3(3+5) = 2(x+2)$

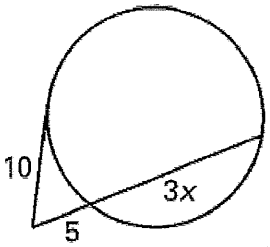
$3(8) = 2x + 4$

$24 = 2x + 4$

$20 = 2x$

$\boxed{10 = x}$

6.



$10(10) = 5(5+3x)$

$100 = 25 + 15x$

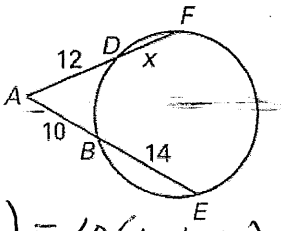
$75 = 15x$

$\boxed{5 = x}$

7.

Use the diagram to find the value of x.

(A) 8
(B) 12
(C) 14
(D) 10
(E) 16



$12(x+12) = 10(10+14)$

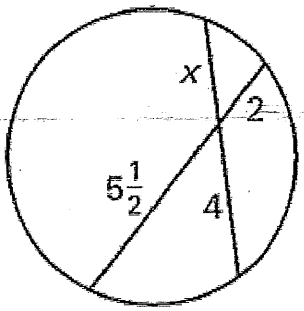
$12x + 144 = 10(24)$

$12x + 144 = 240$

$12x = 96$

$\boxed{x = 8}$

8.



$4(x) = 2(5.5)$

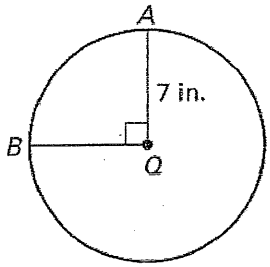
$4x = 11$

$\boxed{x = 2.75}$

Find the length of $\widehat{AB}$

$$\boxed{\frac{L}{2\pi r} = \frac{Arc}{360^\circ}}$$

9.



$$\frac{L}{2\pi(7)} = \frac{90}{360}$$

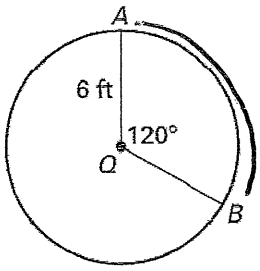
$$\frac{L}{14\pi} = \frac{1}{4}$$

$$4L = 14\pi$$

$$\boxed{L = 3.5\pi \text{ in.}}$$

$L \approx 10.9$ in.

10.



$$\frac{L}{2\pi(6)} = \frac{120}{360}$$

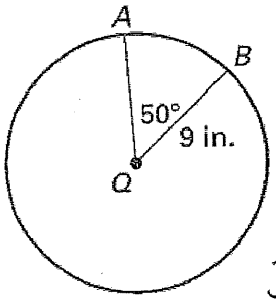
$$\frac{L}{12\pi} = \frac{1}{3}$$

$$3L = 12\pi$$

$$\boxed{L = 4\pi \text{ ft}}$$

$L \approx 12.6$ ft

11.



$$\frac{L}{2\pi(9)} = \frac{50}{360}$$

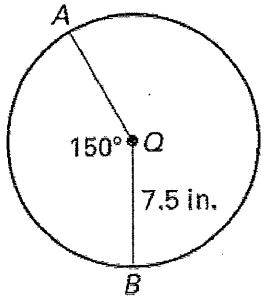
$$\frac{L}{18\pi} = \frac{5}{36}$$

$$\boxed{L = 2.5\pi \text{ in}}$$

$$36L = 5(18\pi)$$

$L \approx 7.9$ in.

12.



$$\frac{L}{2\pi(7.5)} = \frac{150}{360}$$

$$\frac{L}{15\pi} = \frac{5}{12}$$

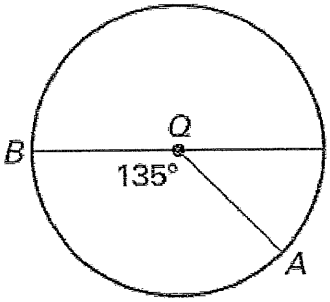
$$12L = 75\pi$$

$$\boxed{L = 6.25\pi}$$

$L \approx 19.6$ in.

13. Find the indicated measure:

Length of $\widehat{AB}$



$d = 20$ cm

$r = 10$ cm

$$\frac{L}{2\pi(10)} = \frac{135}{360}$$

$$\frac{L}{20\pi} = \frac{3}{8}$$

$$8L = 60\pi$$

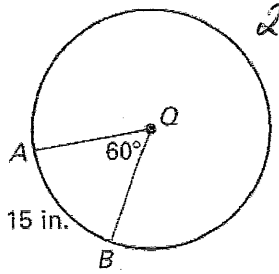
$$\boxed{L = 7.5\pi \text{ cm}}$$

≈ 23.6 cm

14. Find the indicated measure:

* Circumference $= 2\pi r$

Circumference



$$\frac{15}{2\pi r} = \frac{60}{360}$$

$$\frac{15}{2\pi r} = \frac{1}{6}$$

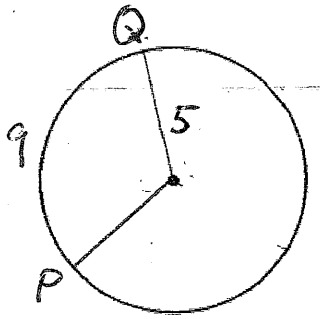
$$2\pi r = 15(6)$$

$$2\pi r = 90 \text{ in.}$$

$$\boxed{C = 90 \text{ in.}}$$

15. Find the indicated measure:

Find $m\widehat{PQ}$



$$\frac{9}{2\pi(5)} = \frac{Arc}{360}$$

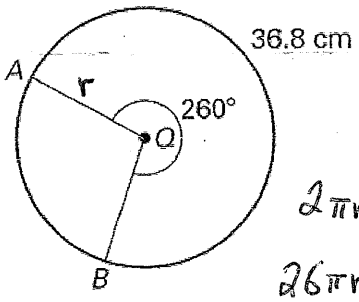
$$\frac{9}{10\pi} = \frac{Arc}{360}$$

$$10\pi(Arc) = 3240$$

$$\boxed{Arc = 103.1^\circ}$$

16. Find the indicated measure:

Radius



$$\frac{36.8}{2\pi r} = \frac{260}{360}$$

$$\frac{36.8}{2\pi r} = \frac{13}{18}$$

$$2\pi r(13) = 18(36.8)$$

$$26\pi r = 662.4$$

$$\boxed{r = 8.1 \text{ cm}}$$