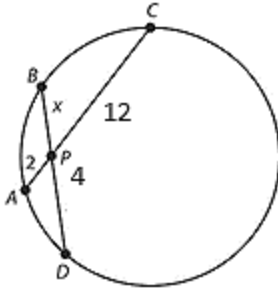


**Unit 8 Review**

For 1–2, use the diagram and information below.



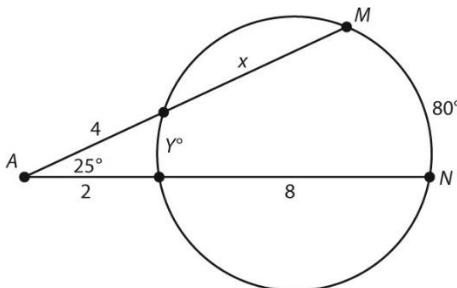
1. What is the value of  $x$ ?

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2. If  $m\widehat{BC} = 54^\circ$  and  $m\widehat{AD} = 22^\circ$  what is  $m\angle BPC$ ?

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For 3–4, use the diagram below.

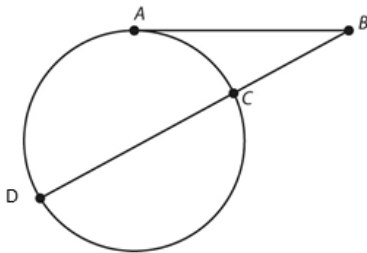


3. Find the value of  $x$ .

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4. Find the value of  $y$ .

5. If  $AB^2 = 64$  and  $BD \cdot BC = 4x$ , what is the value of  $x$ ? \_\_\_\_\_

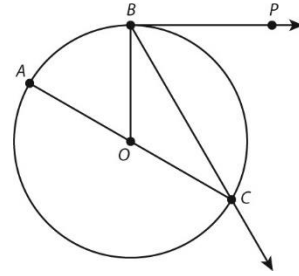


6. What is the radius of a circle with a circumference of  $64\pi$  inches?

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Name \_\_\_\_\_

For 7–8, use the circle centered at point O below.



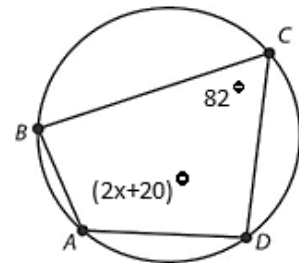
7. If  $m\angle BOC = 120^\circ$ , find  $m\angle PBC$ .

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8. Find  $m\widehat{AB}$ .

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For 9–10, use the diagram below.



9. If  $\angle ABC = 83^\circ$  what is  $m\angle CDA$ ?

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10. What is the measure of  $\angle DAB$ ?

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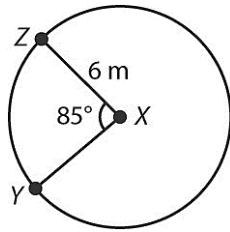
11. What is the area of a circle with circumference  $6\pi$  centimeters in terms of  $\pi$ ?

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12. What is the radius of a circle with an area of  $16\pi$  square inches?

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Refer to the figure below for 13–16.



A circle with center  $X$  and radius 6 meters is shown.

13. What is the circumference of circle  $X$ , to the nearest tenth of a meter?

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14. What is the length of  $\widehat{YZ}$  to the nearest tenth of a meter?

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15. What is the area of circle  $X$ , to the nearest tenth of a square meter?

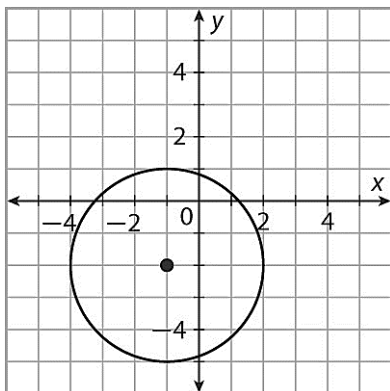
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16. What is the area of the sector formed by  $\angle X$ , to the nearest tenth of a square meter?

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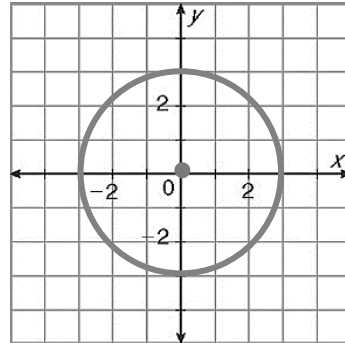
17. What is the equation of the circle below?

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18. What is the equation of a circle that is centered at  $(0, -5)$  and has a diameter of 18 units?

19. Prove or disprove that the point  $(2, \sqrt{3})$  lies on the circle that is centered at the origin and contains the point  $(-3, 0)$ .



Use the given equation of a circle to answer question 20.

$$x^2 + 2x + y^2 - 8y = -13$$

20. Find the center and radius of the circle. Show your work.

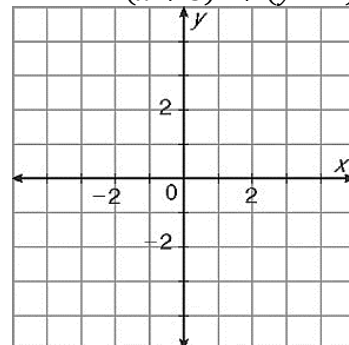
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Radius: \_\_\_\_\_ Center: \_\_\_\_\_

21. Graph the equation

$$(x + 3)^2 + (y - 1)^2 = 4$$



22. Which is bigger, a slice of 9 inch pie cut into 6 equal pieces or a slice of 8 inch pie cut into 5 equal pieces? Show work and explain.

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