Lesson 3.4 Practice: Arc Length and Sector Area

School Launch · Trigonometry · Unit 3: Angles, Radians and the Unit Circle · Worksheet A

Scientific calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. A circle has radius 15. For a central angle of $\frac{7\pi}{2}$, find the arc length and sector area (exact). EASY

2. A circle has radius 14. For a central angle of $\frac{5\pi}{4}$, find the arc length and sector area (exact). EASY

3. A circle has radius 8. For a central angle of $\frac{\pi}{3}$, find the arc length and sector area (exact). EASY

4. A circle has radius 10. For a central angle of π, find the arc length and sector area (exact). MEDIUM

5. A circle has radius 15. For a central angle of $\frac{5\pi}{3}$, find the arc length and sector area (exact). MEDIUM

6. A circle has radius 11. For a central angle of $\frac{5\pi}{3}$, find the arc length and sector area (exact). MEDIUM

7. A circle has radius 6. For a central angle of $\frac{4\pi}{3}$, find the arc length and sector area (exact). MEDIUM

8. A circle has radius 9. For a central angle of $\frac{\pi}{3}$, find the arc length and sector area (exact). HARD

9. A circle has radius 11. For a central angle of $\frac{5\pi}{2}$, find the arc length and sector area (exact). HARD

10. A circle has radius 17. For a central angle of $\frac{2\pi}{3}$, find the arc length and sector area (exact). HARD