

Circumference, Arc Length and Compound Perimeter

Year 8 · Geometry · y8-geo-perimeter

Name: _____

Date: _____

Class: _____

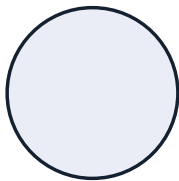
Score: ____ / ____

Instructions

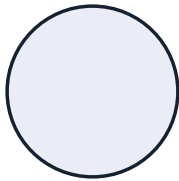
Answer every question in Practice. Try the Challenge section once Practice is complete. 10 questions in total.

Practice

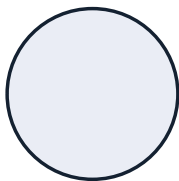
1. A circle has a diameter of 10 cm. Using $\pi \sim 3.14$, find its circumference to 1 decimal place.



2. A circle has a radius of 7 cm. Using $\pi \sim 3.14$, find its circumference to 1 decimal place.



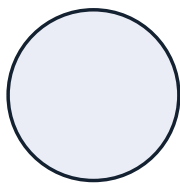
3. A wheel has a diameter of 60 cm. Using $\pi \sim 3.14$, find its circumference to the nearest cm.



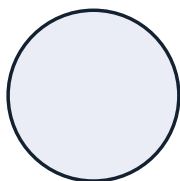
4. A semicircle has a diameter of 14 cm. Using $\pi \sim 3.14$, find the length of the curved edge (half the circumference) to 1 decimal place.

5. A quarter circle has a radius of 8 cm. Using $\pi \sim 3.14$, find the length of the curved edge (arc length) to 1 decimal place.

6. A circle has a radius of 9 cm. The circumference formula uses the diameter: $C = \pi \times d = \pi \times (2 \times \text{radius})$. Using $\pi \sim 3.14$, find the circumference to 1 decimal place.



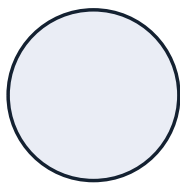
7. Circumference = $\pi \times \text{diameter}$. A circle has a diameter of 20 cm. Using $\pi \sim 3.14$, find the circumference.



8. A semicircle's curved edge is half of the full circumference, not the full circumference. A circle has a diameter of 16 cm. Using $\pi \sim 3.14$, find the length of a semicircle's curved edge.

Challenge

1. A circle has a circumference of 62.8 cm. Using $\pi \sim 3.14$, find its diameter.



2. A wheel with diameter 70 cm makes 5 complete rotations. Using $\pi \sim 3.14$, how far does it travel, to the nearest cm?

