

Area and Circumference of a Circle

NAME _____

Step 1: Locate these objects at the Caterpillar Visitors Center.

Step 2: Use a measuring tape or ruler to determine and record the diameter of each object (round to the nearest inch).

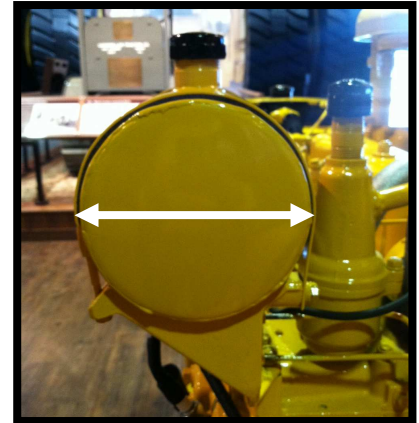
Step 3: After your visit, use the formulas to calculate the radius, area, and circumference of each circle.

Formulas:

- $\pi = 3.14$
- $D = 2 \times r$
- Area of circle = πr^2
- Circumference of circle = $2 \pi r$

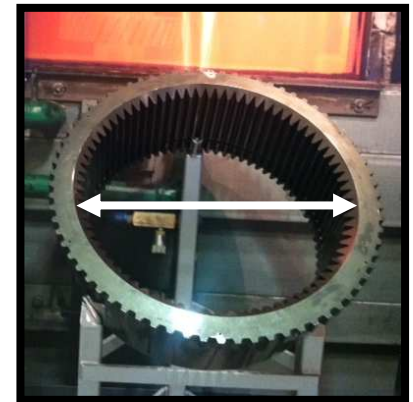
1) **D3400 Gen Set Engine** (located in the Heritage Gallery)

- a) Diameter = _____
- b) Radius = _____
- c) Area = _____
- d) Circumference = _____



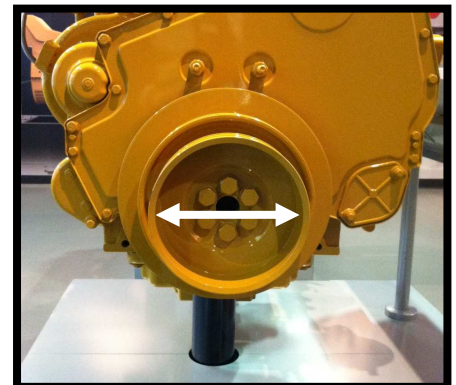
2) **Heat Treat Wheel Loader Lathed Ring** (located in the Caterpillar Production System gallery - measure to the inside of the flat ring surface)

- a) Diameter = _____
- b) Radius = _____
- c) Area = _____
- d) Circumference = _____



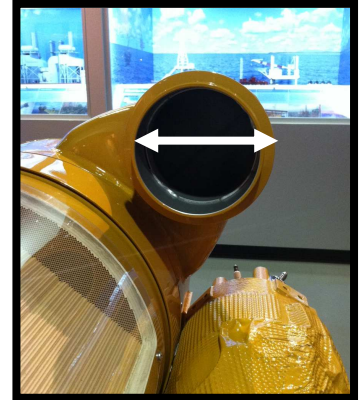
3) **C13 ACERT™ Tier 4 Interim/EU Stage IIIB Engine** (located in the Caterpillar Power Systems gallery)

- a) Diameter = _____
- b) Radius = _____
- c) Area = _____
- d) Circumference = _____



4) **Cat® Aftertreatment Technology** (located in the Caterpillar Power Systems gallery)

- a) Diameter = _____
- b) Radius = _____
- c) Area = _____
- d) Circumference = _____



5) **Tire on the 262C Series 2 Skid Steer Loader** (located in the Working as One Dealer gallery)

- a) Diameter = _____
- b) Radius = _____
- c) Area = _____
- d) Circumference = _____



6) **Steering Wheel of the 420F IT Backhoe Loader** (located on the product floor in the Cat at Work Around the World gallery)

- a) Diameter = _____
- b) Radius = _____
- c) Area = _____
- d) Circumference = _____

