

Assignment

LESSON 1: Pi: The Ultimate Ratio

Write

Define each term in your own words.

1. circle
2. radius
3. diameter
4. pi

Remember

The circumference of a circle is the distance around the circle. The formulas to determine the circumference of a circle are $C = \pi d$ or $C = 2\pi r$, where d represents the diameter, r represents the radius, and π is a constant value equal to approximately 3.14 or $\frac{22}{7}$.

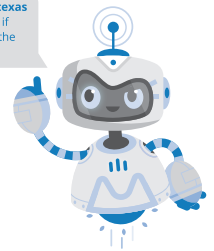
The constant pi (π) represents the ratio of the circumference of a circle to its diameter.

Practice

Answer each question. Use 3.14 for π . Round your answer to the nearest hundredth, if necessary.

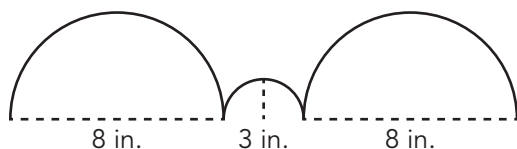
1. Although she's only in middle school, Tameka loves to drive go-carts! Her favorite place to drive go-carts, Driver's Delight, has 3 circular tracks. Track 1 has a radius of 60 feet. Track 2 has a radius of 85 feet. Track 3 has a radius of 110 feet.
 - a. Compute the circumference of Track 1.
 - b. Compute the circumference of Track 2.
 - c. Compute the circumference of Track 3.
 - d. Driver's Delight is considering building a new track. They have a circular space with a diameter of 150 feet. Compute the circumference of the circular space.
2. Tameka wants to build a circular go-cart track in her backyard.
 - a. If she wants the track to have a circumference of 150 feet, what does the radius of the track need to be?
 - b. If she wants the track to have a circumference of 200 feet, what does the radius of the track need to be?
 - c. If she wants the track to have a circumference of 400 feet, what does the diameter of the track need to be?

Visit livehint.com/texas or use this QR code if you need a hint on the Practice questions.



Stretch

A rope is arranged using three semi-circles to form the pattern shown. Determine the length of the rope.



Review

1. Ethan and Corinne are training for a marathon.
 - a. Corinne runs 13.5 miles in 2 hours. What is her rate?
 - b. Ethan wants to run the 26.2 miles of the marathon in 4.5 hours. At about what rate will he have to run to reach this goal? Round to the nearest tenth.
2. Fifteen seventh graders were randomly selected to see how many pushups in a row they could do. Their data are shown.
45, 40, 36, 38, 42, 48, 40, 40, 70, 45, 42, 43, 48, 36
 - a. Determine the mean of this data set.
 - b. Determine the median of this data set.
3. Convert each measurement.
 - a. $4\frac{1}{2}$ pounds = ____ oz
 - b. 22.86 cm = ____ in.