

Assignment

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.

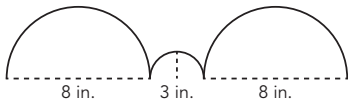
Practice

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?

Stretch

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



Assignment Answers

Write

1. A circle is a collection of points on the same plane equidistant from the same point.
2. The radius of a circle is a line segment formed by connecting a point on the circle and the center of the circle.
3. The diameter of a circle is a line segment formed by connecting two points on the circle such that the line segment passes through the center point.
4. Pi is the ratio of any circle's circumference to its diameter

Practice

- 1a. The circumference of Track 1 is approximately 376.8 ft.
- 1b. The circumference of Track 2 is approximately 533.8 ft.
- 1c. The circumference of Track 3 is approximately 690.8 ft.
- 1d. The circumference of the space is approximately 471 ft.
- 2a. The radius of the track should be approximately 23.89 ft.
- 2b. The radius of the track should be approximately 31.85 ft.
- 2c. The diameter of the track should be approximately 127.39 ft.

Stretch

The length of the rope is approximately 34.54 inches.

Assignment Answers

Review

- 1a. Corinne's rate is 6.75 miles per hour.
- 1b. Ethan will have to run approximately 5.8 miles per hour.
- 2a. The mean is 43.79 pushups.
- 2b. The median is 42 pushups.
- 3a. 72 oz
- 3b. 9 in.

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.