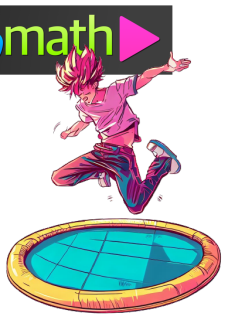
Name: _____



Area of a Circle Word Problems

THE TRAMPOLINE SHOP

1.) The Trampoline Shop sells three different models of circular trampolines: purple, teal, and orange. If the purple model has a radius of 6.5 feet, the teal model has a radius of 7.4 feet, and the orange model has a radius of 8.8 feet, find the following:

   a.) The area of the purple model (to the nearest tenth)

   b.) The area of the teal model (to the nearest tenth)

   c.) The area of the orange model (to the nearest tenth)

2.) The employees of the Trampoline Shop are constructing a custom circular trampoline that has a diameter of 22.6 feet. What is the area of the custom trampoline (to the nearest tenth of a foot)?

3.) The employees of the Trampoline shop are working on two separate orders for custom circular trampolines. The first order is for two trampolines with a diameter of 12 feet. The second order is for one trampoline with a diameter of 18 feet. Which order will require more fabric to complete?

4.) The Trampoline Shop sells a special extra-large circular trampoline that has an approximate area of 1,000 square feet. What is the approximate length of the diameter of the trampoline (to the nearest foot)?

ANSWER KEY

1.)
a.) **Purple Model:** 132.7 square feet
b.) **Teal Model:** 172 square feet
c.) **Orange Model:** 243.3 square feet

2.) A = 401.1 square feet

3.)
Order #1:
$A = \pi \times 6^2 \approx 113.1$
$113.1 \times 2 = 226.2$ square feet
Order #2:
$A = \pi \times 9^2 \approx 254.5$
254.5 > 226.2
The second order will require more fabric.

4.)

$A = \pi \times r^2$
$1{,}000 = \pi \times r^2$
$318.3 \approx r^2$
$17.84 \approx r$
$18 \approx r$
$36 \approx d$
The diameter is approximately 36 feet.