

Name: _____

Area of a Circle Word Problems

PATRIZIA'S PIZZA STAND



1.) Patrizia sells three sizes of pizzas: small, medium, and large. If a small pizza has a radius of 4 inches, a medium pizza has a radius of 6 inches, and a large pizza has a radius of 8.5 inches, find the following:

a.) The area of a small pizza (to the nearest tenth)

b.) The area of a medium pizza (to the nearest tenth)

c.) The area of a large pizza (to the nearest tenth)

2.) On Friday nights, Patrizia makes a special veggie pizza that has a diameter of 20.5 inches. What is the area of the special veggie pizza (to the nearest inch)?



3.) One large pizza has a diameter of 17 inches and one small pizza has a diameter of 8 inches. If the price of one large pizza is the same as the price of four small pizzas, which option is the better deal?

4.) Bianca sells a special extra-large pineapple pizza that has an approximate area of 615.75 square inches. What is the approximate length of the diameter of an extra-large pineapple pizza (to the nearest inch)?



ANSWER KEY

- 1.)
a.) **Small Pizza:** 50.3 square inches
b.) **Medium Pizza:** 113.1 square inches
c.) **Large Pizza:** 227.0 square inches

2.) $A = 330$ square inches

- 3.)
Area of one Large Pizza: 227 square inches
Area of one Small Pizza: 50.3 square inches
Area of 4 Small Pizzas: $50.3 \times 4 = 201.2$ square inches
 $227 > 201.2$
One large pizza is a better deal than four small pizzas.

4.)

$$A = \pi \times r^2$$

$$615.75 = \pi \times r^2$$

$$195.99 \approx r^2$$

$$196 \approx r^2$$

$$14 \approx r$$

$$28 \approx d$$

The diameter is approximately 28 inches.