

Indicators

Objective:

2.02 Solve problems involving perimeter/circumference and area of plane figures.

Vocabulary and Resources		
pi	triangle	nonagon
radius	quadrilateral	decagon
diameter	pentagon	square units
circle	hexagon	height
polygon	octagon	altitude

A. Carlos paid \$8.99 for a large pizza (16-inch diameter). Tameka bought two rectangular pan pizzas, each of which measured 11 inches by 13 inches. She paid a total of \$10.99 for the two pizzas. Which pizza is the better buy based on the number of square inches per pizza?

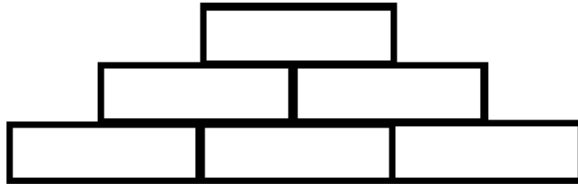
B. Plastic edging for flower beds comes in 50-foot rolls and costs \$6.85 per roll. What is the cost to completely edge two rectangular flower beds 40 feet by 15 feet and one circular flower bed 16 feet in diameter?

(From SREB publication *Getting Students Ready for Algebra I: What Middle Grades Students Need to Know and Be Able to Do*)

C. The area of a square is 196 square meters. If one-half of the perimeter of the square is the same as the perimeter of a regular pentagon, what is the length of one side of the pentagon?

D. Which has the smallest area, a circle with a diameter of 3 yards, a triangle with a base of 20 feet and a height of 11 feet, or a square with a side of 10.5 feet?

E. In the given diagram each rectangle is centered on the two rectangles directly below any given rectangle. If each rectangle has a length of 13 centimeters and a width of 4 centimeters, determine the perimeter and area of the given figure. If two more rows of rectangles are added, determine the perimeter and area of the new figure.



F. Mr. Evans is going to replace the carpet in his family room. The dimensions of the room are 22.5 feet by 26.5 feet. If the cost of the carpet, pad, and installation is \$28.75 per square yard, what will be the total cost excluding tax?

G. One pipe has a 1.25 centimeter diameter. A second pipe has a two and one-half centimeter diameter. What is the difference in the area of the openings of the two pipes?

H. An eight inch diameter pizza costs \$6.95. Kate asserts that a 16-inch diameter pizza (same toppings, same crust) should cost \$13.90. Explain her reasoning and determine if this is a fair price. If not, what would be a fair price?