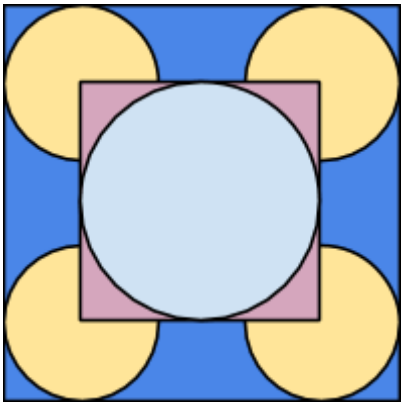
Use the area of a circle to find the circumference, Practice Set C

Name:

Date:

1. LearnZillion Elementary School is painting a mural in the hallway of their school. Each yellow circular shape has an area of 150.72 in^2.



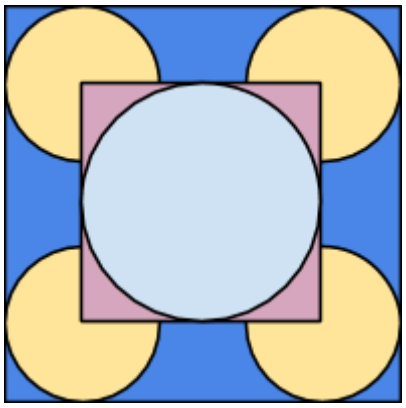
a. The pink square covers one-fourth of the yellow circle to make the circular shape. What is the radius of each yellow circular shape? Show how you found your answer.

b. Find the circumference of all four yellow circles. Show how you found your answer.

c. The area of the inner blue circle is 254.34 in^2. Determine how much black paint is needed to paint the border.

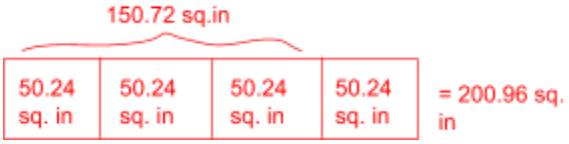
Using area of a circle to calculate circumference, Practice Set C Answer Key

1. LearnZillion Elementary School is painting a mural in the hallway of their school. Each yellow circular shape has an area of 150.72 in^2.



a. The pink square covers one-fourth of the yellow circle to make the circular shape. What is the radius of each yellow circular shape? Show how you found your answer. **8 in**

Three-fourths of the area is 150.72in^2 so the total area is 200.96 in^2



area = πr^2

200.96 in^2 = *3.14* r^2

64 in^2 = r^2

8 in = r

b. Find the circumference of all four yellow circles. Show how you found your answer. **150.63 in**

circumference = $2\pi r$

circumference = *2* $\times$*3.14* $\times$*8 in*

circumference = 50.24 in

circumference of one circular-shape = 0.75 x 50.21 in = 37.6575in

circumference of total circular-shapes = 37.6575 in x 4 = 150.63in

c. The area of the inner blue circle is 254.34 in^2. Determine how much black paint is needed to paint the border.

56.52 in

$area = \pi r^2$

$254.34\ in^2 = 3.14r^2$

$81\ in^2 = r^2$

$9\ in = r$

$circumference = 2\pi r$

$circumference = 2 \times 3.14 \times 9\ in$

$circumference = 56.52\ in$