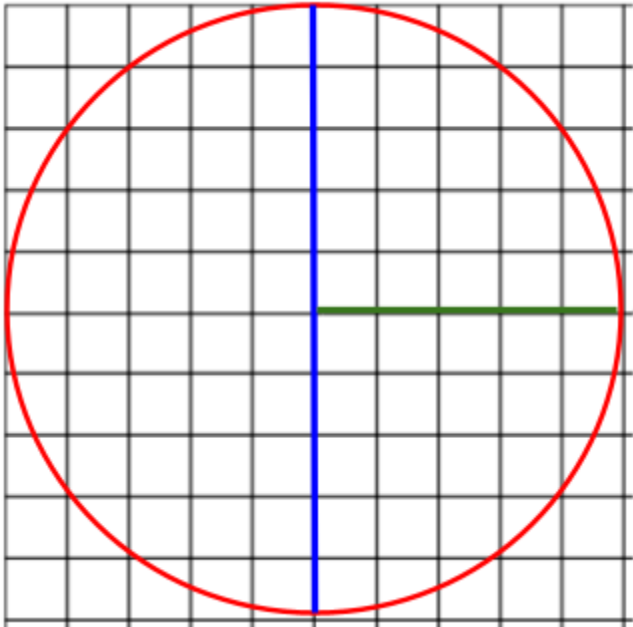
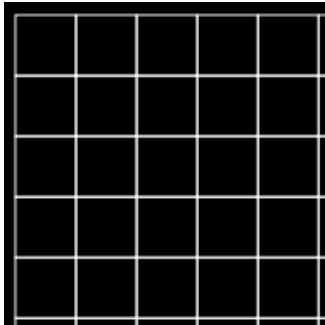


Area of a Circle

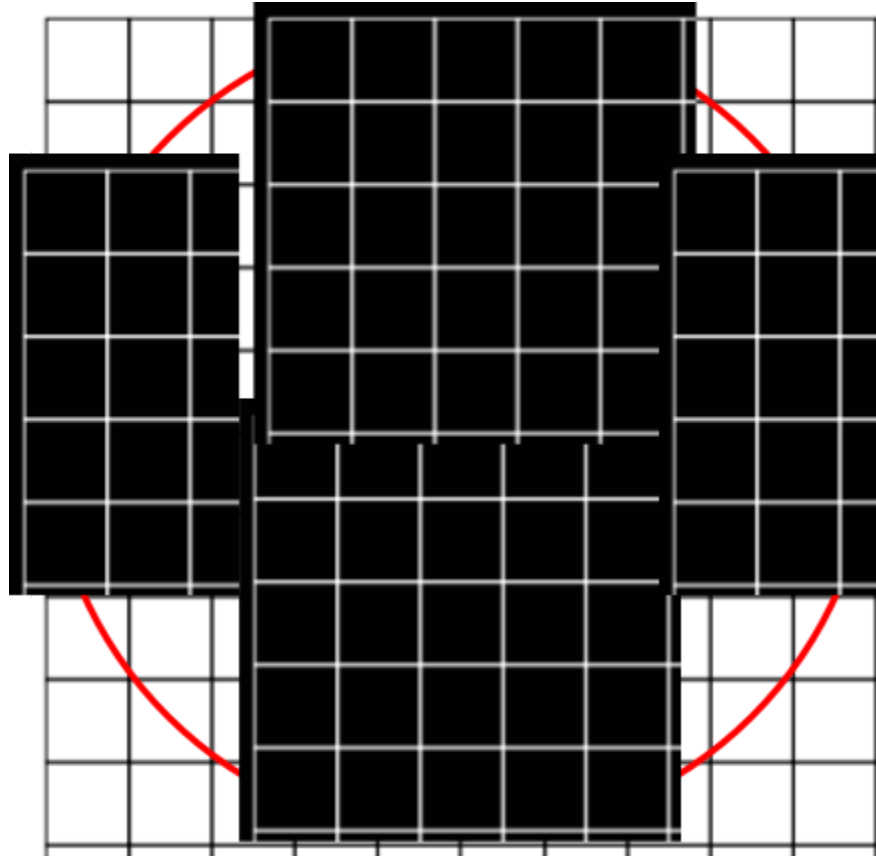
Engage	Your Task			
<p>Draw and label the parts of the circle.</p>	<div><div>Diameter Radius</div></div>			
<p>What is similar between these two shapes?</p>	<table><tr><td>What is similar between these two shapes?</td><td>The radius of the circle is the same length as the side of the square. They are both shapes</td></tr></table>		What is similar between these two shapes?	The radius of the circle is the same length as the side of the square. They are both shapes
What is similar between these two shapes?	The radius of the circle is the same length as the side of the square. They are both shapes			

Explore

How many black big squares can you fit in this circle?

(Make multiple copies of square and half-square)

Your Task



How many black big squares can you fit in this circle?

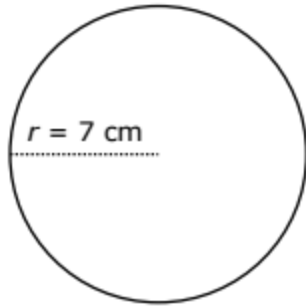
About 3

Explain	Your Task	
How do we find area of circle?		
	The radius of your circle is	5 blocks
	The side of your square is	5 blocks
	If they are equal, the square is known as a	radius-square
	What is the area of the square?	$5 * 5 = 25$
	<p>Because we fit about 3 black squares in the circle, how could we find the area of the circle?</p>	
	Area of the circle =	$3 * 25 = 75$ or $3 * 5 * 5 = 75$
	<p>Watch this and this.</p>	
	Area of a Circle Formula	$A = 3.14 * r^2$ or $A = \pi r^2$ or $A = \pi * r * r$
	Which means...	Area = $3.14 * \text{radius} * \text{radius}$
	<p>** If you struggle with multiplying decimals, use 3 for pi instead of 3.14. It will get you an estimate that is close enough to find the correct answer **</p>	

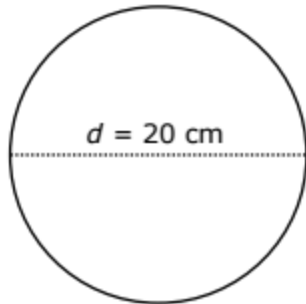
Apply

Your Task

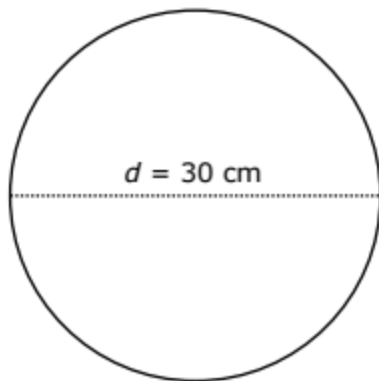
Solve for the area of the circles



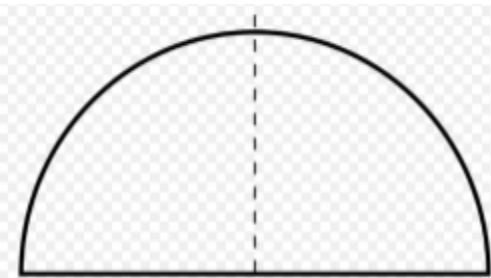
Radius	7 cm
Formula	$A = \pi r^2$ or $A = \pi * r * r$
Substitute	$A = 3.14 * 7 * 7$
Solve	153.86 cm^2



Radius	10 cm, because diameter is 20 cm
Formula	$A = \pi r^2$ or $A = \pi * r * r$
Substitute	$A = 3.14 * 10 * 10$
Solve	314 cm^2



Radius	15 cm, because diameter is 30 cm
Formula	$A = \pi r^2$ or $A = \pi * r * r$
Substitute	$A = 3.14 * 15 * 15$
Solve	706.5 cm^2

Reflect	Your Task											
Could you use what you have learned to find the area of this shape?	 <p>r = 4 cm</p>	<table><tr><td>Radius</td><td>4 cm</td></tr><tr><td>Formula</td><td>$A = \pi r^2$ or $A = \pi * r * r$</td></tr><tr><td>Substitute</td><td>$A = 3.14 * 4 * 4$</td></tr><tr><td>Solve for total</td><td>50.24 cm²</td></tr><tr><td>It's a half</td><td>$50.24 / 2 = 25.12 \text{ cm}^2$</td></tr></table>	Radius	4 cm	Formula	$A = \pi r^2$ or $A = \pi * r * r$	Substitute	$A = 3.14 * 4 * 4$	Solve for total	50.24 cm ²	It's a half	$50.24 / 2 = 25.12 \text{ cm}^2$
Radius	4 cm											
Formula	$A = \pi r^2$ or $A = \pi * r * r$											
Substitute	$A = 3.14 * 4 * 4$											
Solve for total	50.24 cm ²											
It's a half	$50.24 / 2 = 25.12 \text{ cm}^2$											