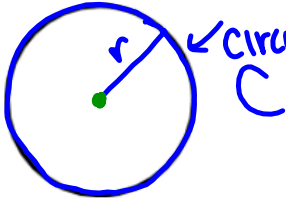
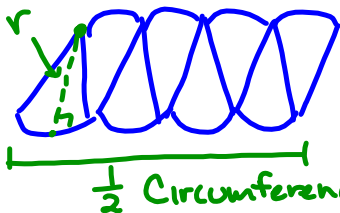


Lesson 7a: Deriving the Formula for Area of a Circle (pg. 621)

Formula Activity Portion:

<p>1) Label the radius and circumference on the circle.</p> 	<p>2) Now we will try to rearrange the slices to form a "parallelogram" using the simulation linked here.</p>	<p>3) Draw the result of your arrangement.</p> 
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Formula Derivation Portion:

<p>4) What is the area formula for a parallelogram?</p> <p>$A = bh$</p>	<p>5) What is height of the figure you formed?</p> <p>$h = r$</p> <p>6) What is the base of the figure you formed?</p> <p>$b = \frac{1}{2}C$</p>	<p>7) Let's substitute these values into the parallelogram formula.</p> <p>$A = bh$</p> <p>$A = \frac{1}{2}Cr$</p> <p>$A = \frac{1}{2}(\pi r)r$</p> <p>$A = \pi r \cdot r$</p> <p>$A = \pi r^2$</p>
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$C = \pi d$
 $C = 2\pi r$

8) Based on step 7, what is the area formula for your circle? $A = \pi r^2$

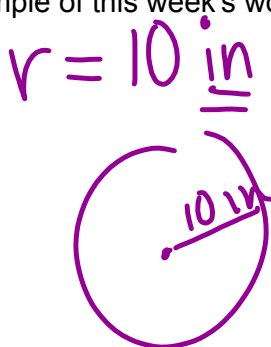
Let's see it again digitally on Buzzmath!

 <p>Common Core 7th Grade Change book</p>	 <p>Geometry</p>	<p>Discovering the Formula for the Area of a Circle</p> <p>Pages <u>2-4</u> only</p>
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Try using your formula! NOTE: It says use 3.1416 to estimate pi. Use a calculator.

<p>Buzzmath pg. 7 work part 1</p>	<p>Buzzmath pg. 7 work part 2</p>	<p>Buzzmath pg. 7 work part 3</p>
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Sample of this week's work style:



$A = \pi r^2$
 $A \approx 3.1416 (10)^2$
 $A \approx 3.1416 (100)$
 $A \approx 314.16 \text{ in}^2$



Buzzmath
3.1416