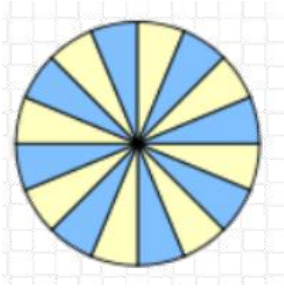


## Possible Solutions

Use a model to connect the circumference of a circle to its formula.

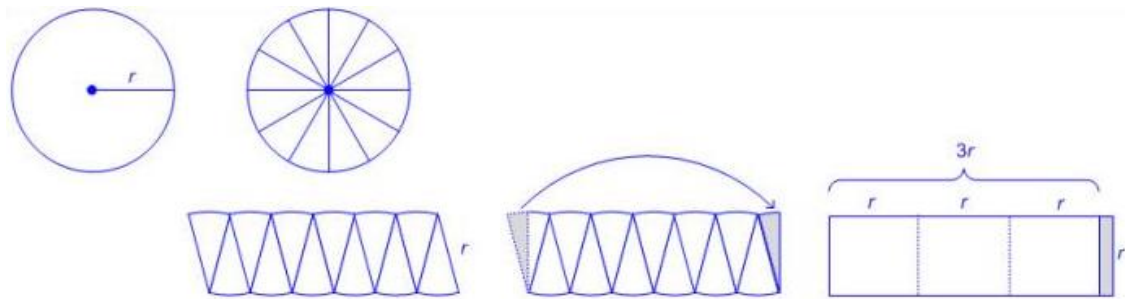


### Solution 1

A student can use string to measure the length around a circle and to measure the length of the radius of the circle. The length of string needed to represent the circumference of the circle is a little more than six times the length of string needed to represent the radius of the circle.

$$C = 6r = 2(3)r = 2\pi r$$

### Solution 2



When a circle is “un-rolled”, a parallelogram is almost created. The length of the parallelogram is a little longer than 3 times the length of the radius.

$$\text{Area of a parallelogram} = \text{Area of a circle}$$

$$(3r)r = \pi r^2$$

$$3r^2 = \pi r^2$$

$$\pi r^2 = \pi r^2$$