

# MasterMath

## $\pi$ and the Circumference of a Circle

$\pi = 3.14$ ;  $C = \pi d$ ;  $C = 2\pi r$

Name \_\_\_\_\_

Date \_\_\_\_\_

### 1. Fill in the blanks

radius	diameter	Circumference
62 yards	124	389.4 yards
18 mm	36	113.0 mm
5.5'	11'	34.5'

radius	diameter	Circumference
6"	12"	37.7"
2'	4'	12.6'
5cm	10cm	31.4cm

2. The diameter of the rear tire of this bike is 34". In low gear, you need to rotate the pedals 3 times to make the rear tire rotate 360°. How far will you travel in low gear each time you rotate the pedals?

35.6"



3. The Circumference of A is twice the Circumference of B. If the radius of A is 10", what is the radius of B?

5"



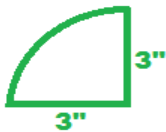
4. What is the perimeter of this semi-circle?

12.9'



5. The arch in the figure below is 1/4 of a circle. Can you determine the perimeter of the figure?

10.7"



6. The smaller gear is powered by the larger gear. Which gear rotates faster? Why?



The larger gear has a larger circumference than the smaller gear. During one rotation of the gear, each spoke moves around the circumference of the gear. Because the circumference of the smaller gear is less than the circumference of the larger gear, it will complete a rotation faster. The smaller gear, therefore, rotates faster.