

**Advanced Geometry:  
Circle Word Problems**

**Name:** \_\_\_\_\_

- 1.) A bicycle wheel has a diameter of 26". How many revolutions would the tire complete in a span of a mile long bike ride?
  
- 2.) A bicycle wheel has a diameter of 24". How many revolutions would the tire complete in a span of a mile long bike ride?
  
- 3.) A bicycle wheel has a diameter of 28". How many revolutions would the tire complete in a span of an 8 mile long bike ride?
  
- 4.) A biker whose wheel is 30" in diameter runs over a piece of gum. How many times does the gum touch the pavement if the biker rides for 9 miles with it attached to his wheel?
  
- 5.) A biker whose wheel is 24" in diameter runs over a piece of gum. How many times does the gum touch the pavement if the biker rides for 4 miles with it attached to his wheel?
  
- 6.) Which is the better buy: a 10" diameter pizza for \$5.99 or a 14" pizza for \$10.99?
  
- 7.) Which is the better buy: an 8" diameter pizza for \$3.99 or a 16" pizza for \$14.99?
  
- 8.) What happens to the area of a circle when its radius is doubled?
- 9.) What happens to the radius of a circle when its radius is cut in half?

## A cool application.. or at least a nifty question to ponder

### Lasso the Earth!

Suppose a rope is wrapped tight against the ground around the equator of the Earth (24,859.82 mile long rope). How many feet longer must we make the rope for it to wrap around the equator and be 6 inches off the ground?

