

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

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Circumference Word Problems

For each problem, you are expected to complete all of the following:

1. Draw a diagram of a circle and label all given information
2. Write the formula that you will use (e.g.  $C = 2\pi r$ )
3. Solve for the *exact* answer (i.e. in terms of  $\pi$ ) and BOX this answer
4. Solve for the *approximate* answer, (use a calculator and round your answer to the nearest tenth) and BOX this answer

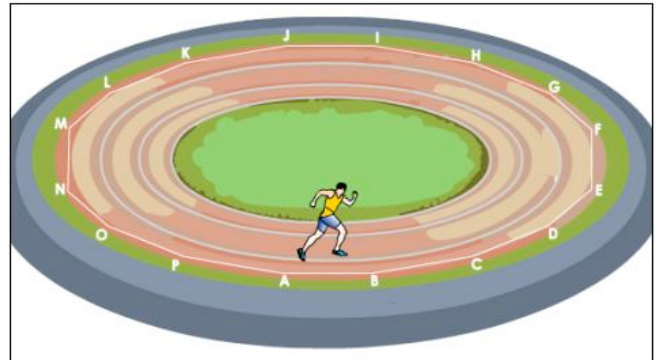
1. You buy a can of soup and decide to replace the label with your own. If the radius of the can is 4.5cm, what is the length of the label? (Assume the label does not need to overlap after wrapping around the can.) Remember: Put a box around two answers, your **exact** and **approximate** answers!



2. Your friends join you for a hike in the Pocono's. There, you find a massive redwood tree. You are told you'll get extra credit in Geometry if you can figure out its diameter without cutting it down. One of your friends has an idea: if you can measure the circumference of the tree, you can figure out the radius, which helps you find the diameter. If the tree's circumference is 43.2ft, what is its diameter?



3. Robbinsville decides to try something new: instead of having its current track for running, it is to be replaced with a circular one. Instead of running 4 laps to complete 1 mile, the new circular track will allow you to run a mile in 3 laps! What will be the diameter of the new track? HINT: Figure out the circumference of the circular track first!

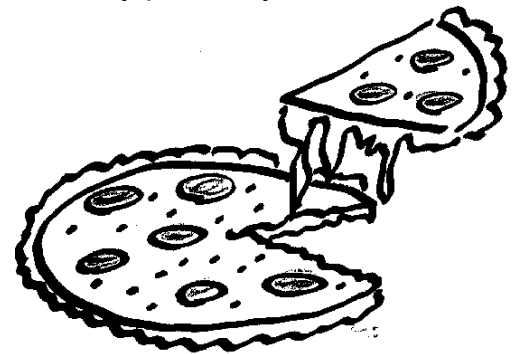


4. Pizza night! You call your favorite pizzeria, DeLorenzo's to find out what kind of pizza's they sell. They like to play math games with their customers, so they present you with two options:

Option A: Pizza pie with the radius of 10" for \$13.95

Option B: Pizza pie with a circumference of 72" for \$13.95

Which pizza is the better buy? Why?



5. Your Geometry teacher rents a fast car for the weekend. Her friend, a Physics teacher, uses a stopwatch to time how long it takes your teacher to make one complete revolution about the track. If it takes your teacher 10.8 seconds to make a revolution around the track, which has a diameter of 420ft, how fast is your teacher driving? (NOTE: an exact answer is not necessary for this problem)

