26. Ratios to Robots

Name_____

The Problem: The term ratio, in a very general sense, is a comparison between two sets of things. Think about how it makes sense to you to express the relationship between two quantities by considering the two comparisons below.
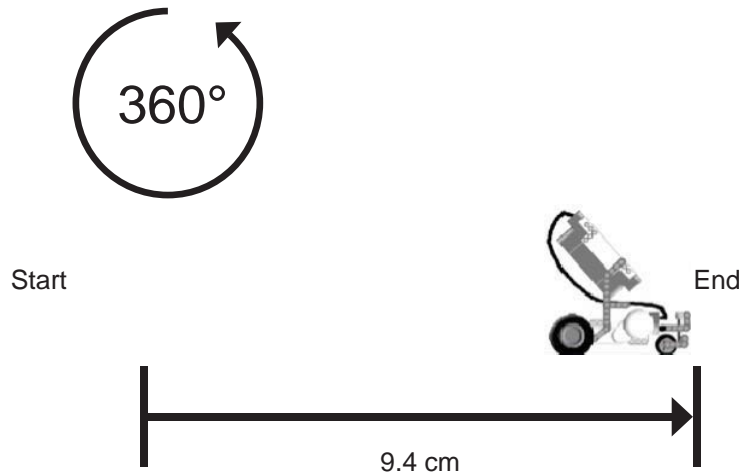

360°

Start   End

9.4 cm

Figure 1: When this robot was programmed to do 360° of motor rotations it traveled straight 9.4 centimeters.

1. Look at the picture. What is the ratio of Motor Rotations (degrees) to Distance Traveled (millimeters) for this robot?

2. Write as many ratios as you can (at least three) that are equivalent to the first ratio that you wrote down.

3. Suppose you made a dance routine and on your blueprint you wrote that for the first move the robot needed to travel straight forward a distance of 7.2 meters. How many degrees of motor rotations would you have to program for this robot to do this part of your routine?

4 Suppose you made a dance routine with this robot and programmed its motors to rotate 10,000 degrees. How many millimeters straight forward would you expect this robot to travel?

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