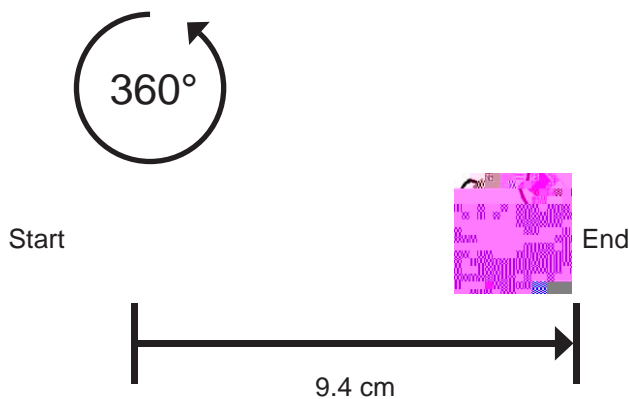


27. Ratios to Robots Cont.

Name _____

Directions: Show all work, describe how you got the answer using mathematics and words, and circle your final answer.

The Problem: Suppose Jazmine made a dance routine and on her first move the robot needed to travel straight forward a distance of 47 centimeters. How many degrees of motor rotations should she put in her program for this robot to do this move correctly? *Explain your answer using math and words.*



Some equivalent ratios:

$$9.4\text{cm} : 360^\circ$$

$$1\text{cm} : 38.3^\circ$$

$$18.8\text{cm} : 720^\circ$$

$$2\text{cm} : 76.6^\circ$$

$$4\text{cm} : 153.2^\circ$$

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