

# THE TRAVELING COIN

Materials: coin  
centimeter ruler  
graph paper

Procedure:

1. Place a coin on a piece of graph paper in the lower left-hand corner. Draw a circle around the coin. Mark the center of this circle with the word "START."
2. READ ALL CAREFULLY BEFORE BEGINNING! Move the coin in the manner listed below. After each move, draw a circle around the coin and MEASURE the distance the coin moved using a centimeter ruler. Replace the coin each time at the end of the previous distance and draw the next distance from the same relative position you did before. Be careful to measure from and draw from the same point on the coin every time! Draw lines to trace the path of the coin across the paper.
  - a) 2 centimeters North
  - b) 5 centimeters East – make sure you replace the coin at the end of the first distance so you re-start at the same relative position (top, center, etc.)
  - c) 5 centimeters North
  - d) 3 centimeters West
  - e) 4 centimeters North
  - f) 6 centimeters East
  - g) 3 centimeters South....STOP....Label this circle "FINISH."
3. Find the total distance the coin traveled. Measure from the same point on the coin each time. \_\_\_\_\_
4. Using the centimeter ruler, draw a line from the "START" position to the "FINISH" position. Measure the length of this line using the centimeter ruler.  
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5. Which is longer, the total distance traveled or the "START-to-FINISH" line? \_\_\_\_\_
6. In what direction is the "FINISH" position in comparison to the "START" position? Circle one of the following:
  - a) directly North
  - b) directly South
  - c) directly East
  - d) directly South
  - e) Northeast
  - f) Northwest
  - g) Southeast
  - h) Southwest
7. Write instructions on how to get from the "START" position to the "FINISH" position **using as few words as possible.**  
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