

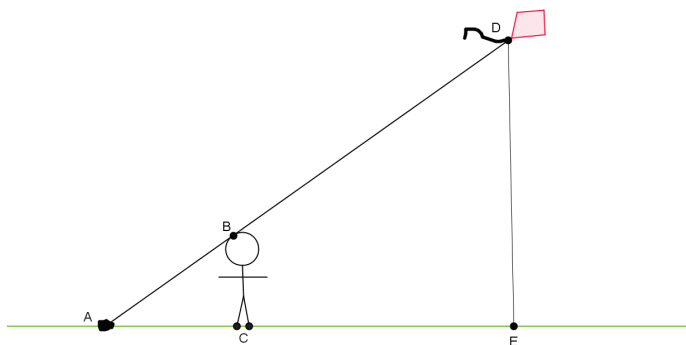
Name _____

Date _____

Lesson 12: Modeling Using Similarity

Exit Ticket

Henry thinks he can figure out how high his kite is while flying it in the park. First, he lets out 150 feet of string and ties the string to a rock on the ground. Then, he moves from the rock until the string touches the top of his head. He stands up straight, forming a right angle with the ground. He wants to find out the distance from the ground to his kite. He draws the following diagram to illustrate what he has done.



- a. Has Henry done enough work so far to use similar triangles to help measure the height of the kite? Explain.
- b. Henry knows he is $5\frac{1}{2}$ feet tall. Henry measures the string from the rock to his head and finds it to be 8 feet. Does he have enough information to determine the height of the kite? If so, find the height of the kite. If not, state what other information would be needed.