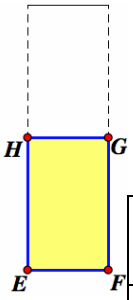
Name: _____



Do Now:

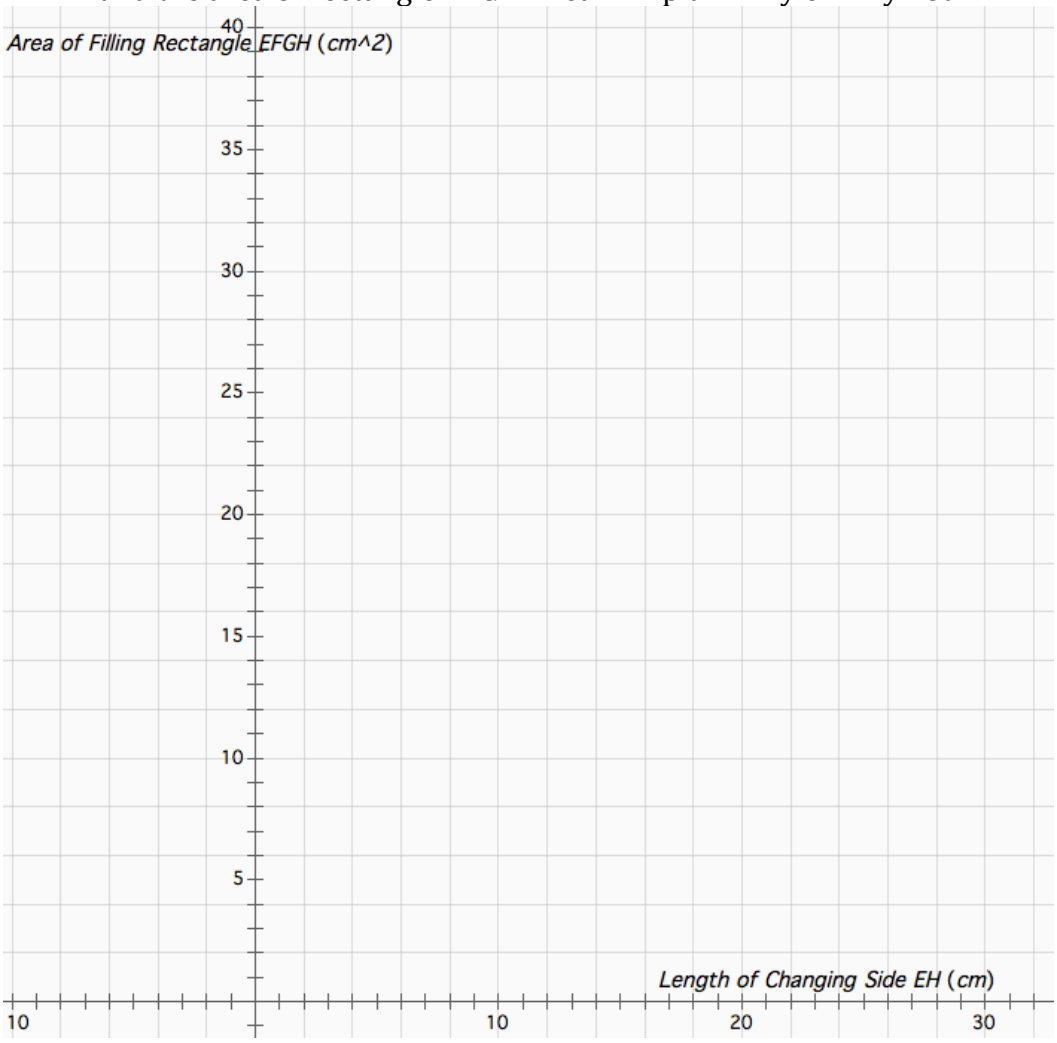
1. The area of rectangle EFGH is changing as the length of side EH is increasing. When the length of EF is **3 cm**, determine amounts of area of rectangle EFGH for different side lengths of EH:

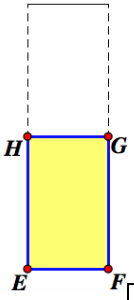
Length of Side EH	**3 cm**	**5 cm**	**7 cm**	**9 cm**	**10 cm**	**12 cm**
Area of Rectangle EFGH						

2. Complete the following statement: When the length of side EH increases by

   _____, the area of rectangle EFGH increases by _____.

3. Plot points representing the table values. Is the relationship between the side length of EH and the area of rectangle EFGH linear? Explain why or why not.





Making Predictions

The area of rectangle EFGH is changing as the length of side EH is increasing.
The length of EF is **3 cm**.

Increasing amounts

4. Predict the amount of increase in the area of rectangle EFGH that would result when the side length increased from 14.5 cm to 16.5 cm.

Length of Side EH	**14.5 cm**	**16.5 cm**
Amount of increase in Area of Rectangle EFGH		

5. Predict the amount of increase in the area of rectangle EFGH that would result when the side length increased from 103 cm to 105 cm.

Length of Side EH	**103 cm**	**105 cm**
Amount of increase in Area of Rectangle EFGH		

6. If you started when the length of side EH was 21 cm, what side length would you need to end with to produce an increase of 6 cm^2 in the area of rectangle EFGH?

Length of Side EH	**21 cm**	
Amount of increase in Area of Rectangle EFGH	**6 cm^2**	

7. Predict the amount of increase in the area of rectangle EFGH that would result when the side length increased from 1.25 cm to 5.25 cm.

Length of Side EH	**1.25 cm**	**5.25 cm**
Amount of increase in Area of Rectangle EFGH		

Decreasing amounts

8. Predict the amount of decrease in area that would result from the change in side length.

Length of Side EH	**76 cm**	**71 cm**
Amount of decrease in Area of Rectangle EFGH		