Homework

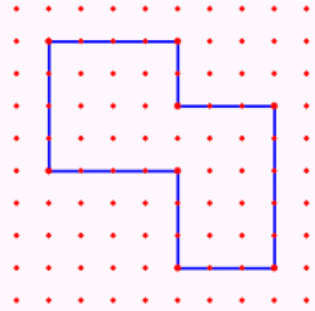
Perimeter and Area of Polygons
Lesson – 1

Name:_____

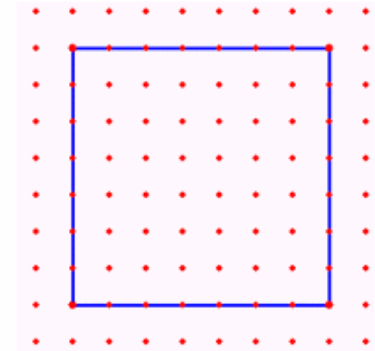
1) The king is impatient. While all contestants practice their measuring skills, he has asked a small group, including you, to help him choose the best design for a park in his new kingdom.

   Q: The king wants to show off his wealth, so he wants to create the longest fence possible for this park and decorate it with rubies and gold. Which of these designs will have the longest fence?

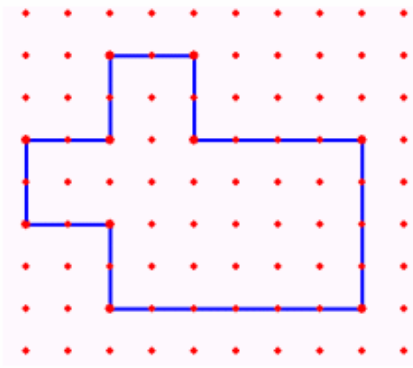
   Note: The distance between 2 red pegs is equal to 1 unit length or 1 unit width. In this case, 1 unit = 1 foot



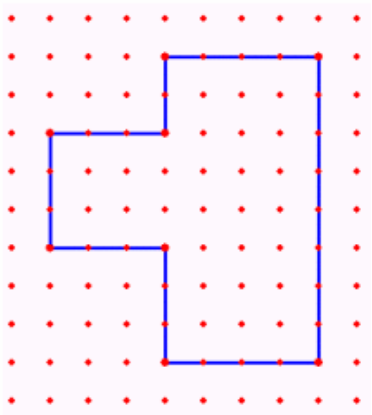
a) Perimeter = _____ feet



b) Perimeter = _____feet



c) Perimeter = _____ feet

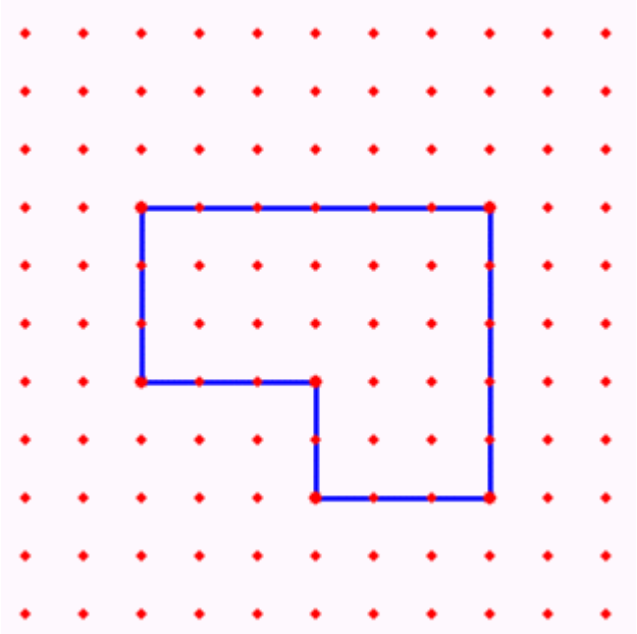


d) Perimeter = _____ feet

Show your calculations:

The king should choose design: _____

2) Tom is a carpenter and likes to have his construction tools readily available. He's decided to expand his garage to have more space for his tools. The floor plan below shows Tom's current garage. If he wants to expand his garage by 1 meter on all sides, what will be the **new perimeter** of the garage?



Note: The vertical and horizontal distance between two dots is equal to 1 m long or 1 m wide.

a) Calculate the perimeter of the original garage:

Perimeter of the original garage = _____ m.

b) Make a drawing on the floor plan above to show what the new garage will look like.

c) Calculate the perimeter of the new garage.

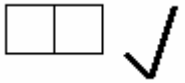
Perimeter of the new garage = _____ m.

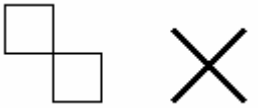
d) How much longer is the new perimeter compared to the original?

e) Your friend Karl does not understand how to find the perimeter of the expanded garage. Explain to him, step by step, how to find the answer to this problem.

3) Draw four different figures using exactly 9 tiles. Calculate the perimeter of each figure.

Condition: Each tile must touch another tile with at least one of its full sides:





- If possible, draw a figure with 9 tiles that will have a perimeter of exactly 19 units.

Drawing:

If not possible, explain why.