Graphic Details

> You need: pattern blocks (optional), graph paper

Maraea made this pattern with square tiles:

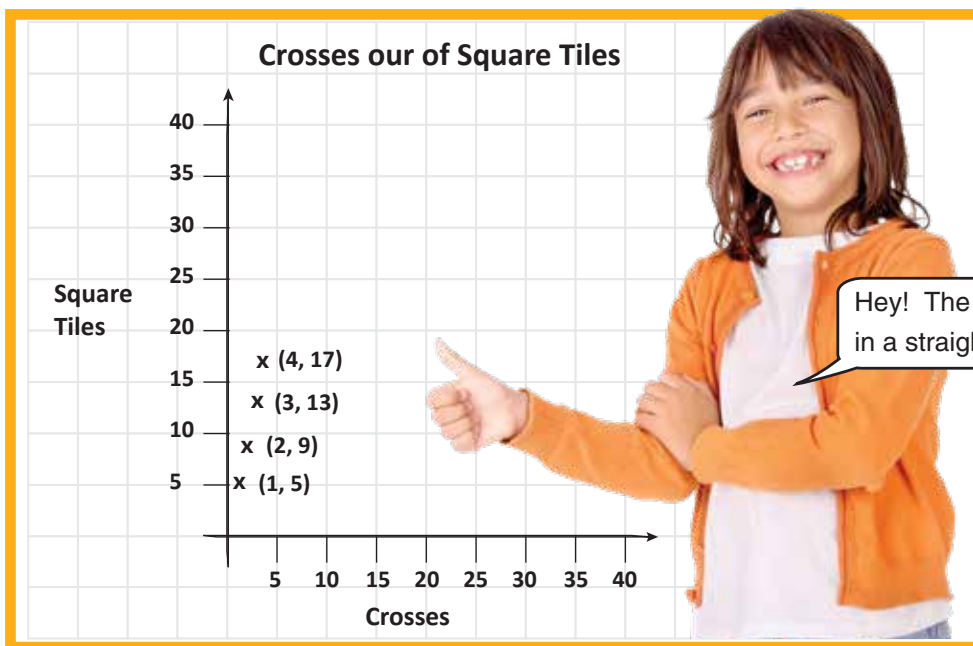*1 cross*   *2 crosses*   *3 crosses*   *4 crosses*
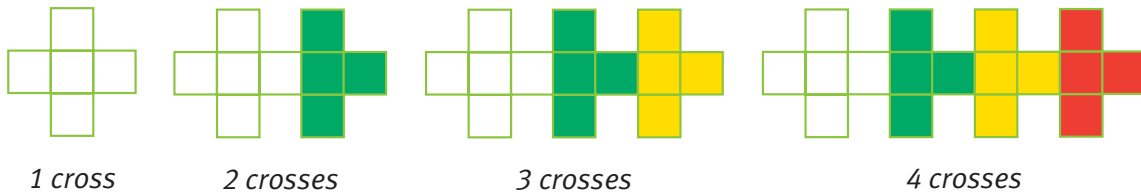
1. How many square tiles would Maraea have needed to make 5 crosses?
    A table may help you see the pattern:

Number of crosses	Number of square tiles
1	5
2	

2. Maraea graphed the relationship between the number of crosses and the number
    of tiles like this:

Crosses our of Square Tiles
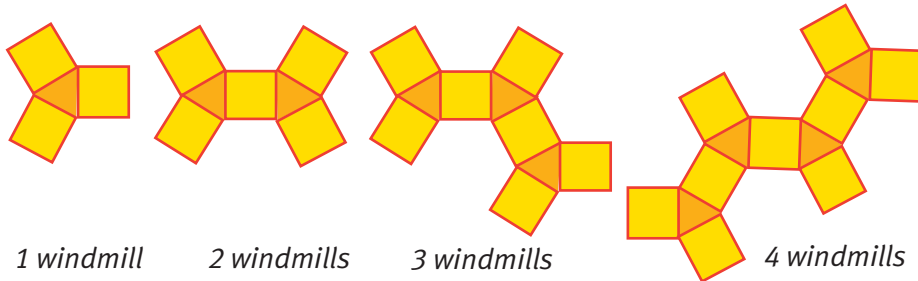
Hey! The points are in a straight line.

Suppose Maraea added more points to her graph by drawing a straight line through
her existing points. Would the following points be on it? Explain your answers.

a. (6,25)   b. (10,41)   c. (9,36)   d. (7,30)

e. (8,33)

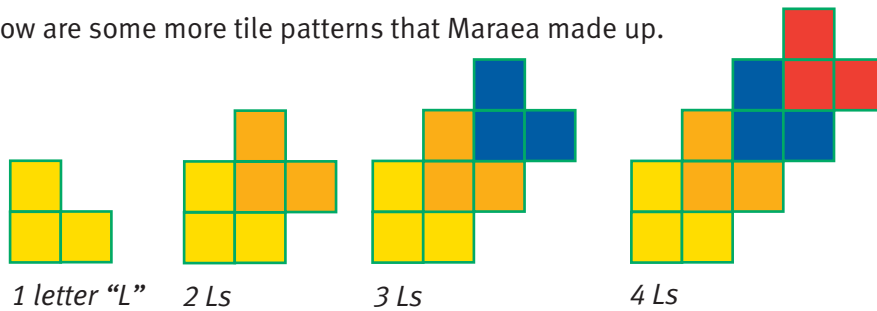**1.** Graph the pattern below. Put the number of triangles along the horizontal axis and the number of square tiles along the vertical axis. Use your graph to estimate how many square tiles will be needed to surround 10 triangles.
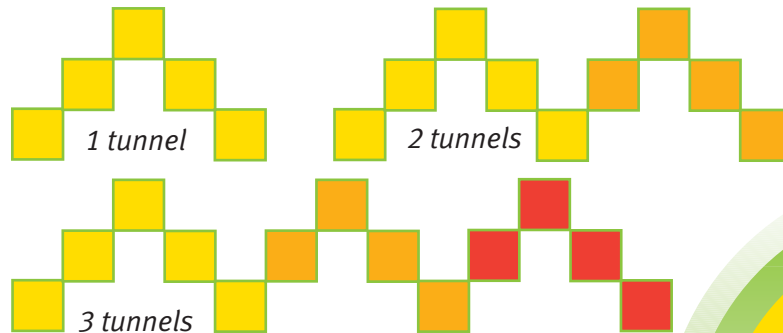

1 windmill   *2 windmills*   *3 windmills*   *4 windmills*

2. Below are some more tile patterns that Maraea made up.

i.

1 letter "L"   *2 Ls*   *3 Ls*   *4 Ls*

ii.

1 tunnel   *2 tunnels*

3 tunnels

iii.

1 dog   *2 dogs*

3 dogs

4 dogs

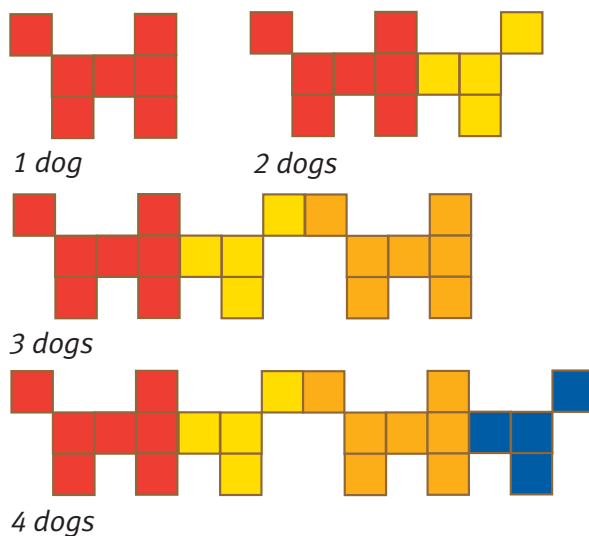**a.** Graph each pattern as you did for question **1**.

b. Use the path of the dots on your graph to predict how many tiles would be needed for the tenth figure in the pattern.