

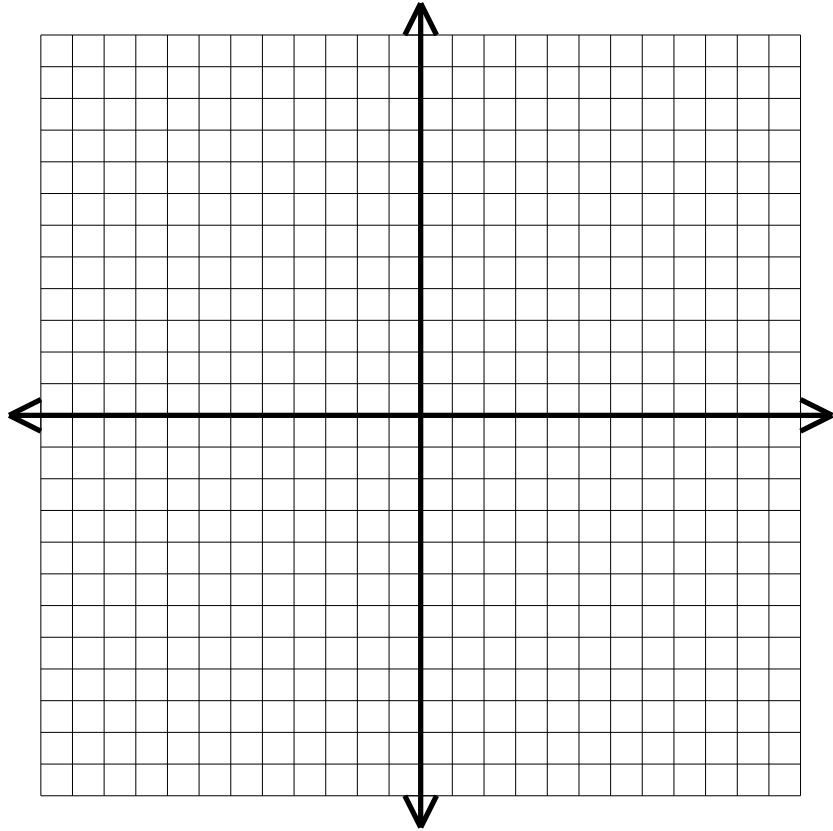
Name _____

Period _____ Date _____

Homework 5.1.2

1) Graph $y = x^2 - 6x + 5$ and fully describe it using all of the terms used in our lessons

x	y



Description (domain, range, min/max,etc.)

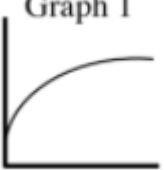

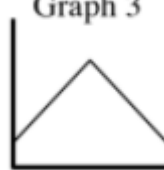

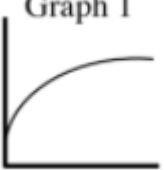

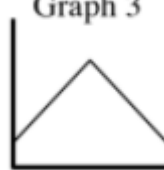

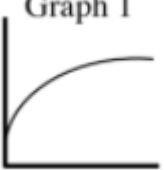

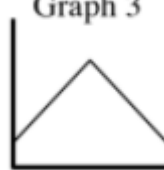

2) While shopping at his local home improvement store, Chen notices that the directions for an extension ladder state, "*This ladder is most stable when used at a 75° angle with the ground.*" He wants to buy a ladder that will reach a height of 26 feet to paint a two-story house.

How long does his ladder need to be? Draw a diagram and set up an equation for this situation. Show all work.

3) A hotel in Las Vegas is famous for its large-scale model of the Eiffel Tower. The model, built to scale, is 128 meters tall and 41 meters wide at its base.

If the real tower is 324 meters tall, how wide is the base of the real Eiffel Tower?

4) Match each table of data below with the most appropriate graph on the right, and then briefly explain how you know the graph matches the data

<p>a) The temperature in an oven when cooking a roast.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 2px;">Time (min)</th> <th style="padding: 2px;">Temperature (°F)</th> </tr> </thead> <tbody> <tr><td style="padding: 2px;">0</td><td style="padding: 2px;">70</td></tr> <tr><td style="padding: 2px;">5</td><td style="padding: 2px;">200</td></tr> <tr><td style="padding: 2px;">15</td><td style="padding: 2px;">300</td></tr> <tr><td style="padding: 2px;">30</td><td style="padding: 2px;">325</td></tr> <tr><td style="padding: 2px;">60</td><td style="padding: 2px;">325</td></tr> <tr><td style="padding: 2px;">120</td><td style="padding: 2px;">325</td></tr> <tr><td style="padding: 2px;">180</td><td style="padding: 2px;">325</td></tr> </tbody> </table>	Time (min)	Temperature (°F)	0	70	5	200	15	300	30	325	60	325	120	325	180	325	<p>b) The time needed for an athlete to run a certain distance.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 2px;">Distance (meters)</th> <th style="padding: 2px;">Time (min:sec)</th> </tr> </thead> <tbody> <tr><td style="padding: 2px;">100</td><td style="padding: 2px;">0:12</td></tr> <tr><td style="padding: 2px;">200</td><td style="padding: 2px;">0:25</td></tr> <tr><td style="padding: 2px;">400</td><td style="padding: 2px;">1:10</td></tr> <tr><td style="padding: 2px;">800</td><td style="padding: 2px;">2:24</td></tr> <tr><td style="padding: 2px;">1600</td><td style="padding: 2px;">5:20</td></tr> <tr><td style="padding: 2px;">3000</td><td style="padding: 2px;">10:59</td></tr> </tbody> </table>	Distance (meters)	Time (min:sec)	100	0:12	200	0:25	400	1:10	800	2:24	1600	5:20	3000	10:59	<table border="1" style="width: 100%; height: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; padding: 10px;"> <p>Graph 1</p>  </td> <td style="width: 50%; text-align: center; padding: 10px;"> <p>Graph 2</p>  </td> </tr> <tr> <td style="text-align: center; padding: 10px;"> <p>Graph 3</p>  </td> <td style="text-align: center; padding: 10px;"> <p>Graph 4</p>  </td> </tr> </table>	<p>Graph 1</p> 	<p>Graph 2</p> 	<p>Graph 3</p> 	<p>Graph 4</p> 
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5) Examine the tile pattern below. Based on the information provided for figures 1 – 3, answer the following:

- a) Make a table to represent the number of tiles (squares) for the figures
- b) How many tiles would there be in figure 4? Explain how you know.
- c) Write an equation for the relationship between the figure number and the number of tiles.

