Math 8E Unit 4.4: Slope-Intercept Form, Matching Graphs, Interpolation and Extrapolation

1. What are the types of lines for linear systems?

-horizontal line:

-vertical line:

-oblique line:

 -line crosses both ‘x’ and ‘y’ axis

1. What is the ‘slope-intercept form’ of a linear system?

-it looks like: y = mx + b

1. How do we use the ‘slope-intercept form’ to graph a linear system WITHOUT using table of values?

-step 1: first ordered pair = b

-step 2: use slope (m) to find the next point.

-step 3: repeat to find one or two more points.

-step 4: connect the dots.

Ex: graph y = 2x + 3

Ex: graph y = 2x – 3

Ex: graph y = -2x+3

Ex: graph y = -2x – 3

Ex: what is the linear equation for:

Ex: what is the linear equation for:

1. What is ‘interpolation’ and ‘extrapolation’?

-the point of having graphs is so we can use them to predict things. For example, we read in between the points (interpolation) to find solutions. We can also go beyond the known points (extrapolation) to predict what will happen.

Ex: Alex wants to chart his spending rate of his lucky envelope money. He has $100. After 5 weeks, he has $50. At the end of 10 weeks, he has nothing left. How much money did he have at 8 weeks? 3 weeks?

Ex: Angelina is training for the Sun Run. She wants to chart her progress to estimate how fast she can run by the time the Sun Run begins. Below is her current chart:

1. Predict how far she can run in 25 minutes.
2. How long will it take her to run 10 km?

-WB: pg 142 #1 -7: 3 each

-MMS9 pg 196 #4, 8, 9, 11, 13

-upcoming: review, test