Modeling Functions--Standard Form I

Big Idea: Standard form : **ax** + **by** = **c** is beneficial when there are two independent variables.

To graph standard form equations, use the extremes (or x and y intercepts) to find points.

Example:

Sally is going to a buffet restaurant. The price for children is $12 and adults are $16. She is planning on spending a total $180.

a. Write an equation to represent this situation.

$$12k + 16a = 180$$

b. Label the axes and make a table using the intercepts.

k	a
15	0
0	11.25

c. x-intercept: $(15, 0)$

What does the x-intercept represent in this situation?

Max # of kids meal purchased with $180

d. y-intercept: $(0, 11.25)$

What does the y-intercept represent in this situation?

Max # of adult meals purchased with $180

# of adult meals (vertical axis), # of kids meal (horizontal axis)