Graph the following lines using the x- and y-intercepts.

1. $2x - 3y = 6$

2. $y - 5 = 2x + 1$

Graph the following lines by identifying the important point from the given equation and then using the slope.

3. $y + 4 = \frac{4}{3}(x - 3)$

4. $y - 2 = -\frac{1}{5}(x + 5)$
You are baking cookies for the school bake sale. After selling 20 cookies, you have made a profit of $5. You are selling your cookies for $1.25 each. The equation \( y = 1.25(x - 20) \) represents this situation where \( x \) is the number of cookies sold and \( y \) is the profit. Use this information, as well as the graph below to answer the following questions. (Hint: Remember that profit is how much money you make in total, therefore this equation include how much money you spent on supplies for cookies.)

5. What does the x-intercept represent?

6. What does the y-intercept represent?

7. Why are the x- and y-intercepts important in this scenario?
Answer Key:

1. 

2. 

3. 

4. 

5. The x-intercept represents how many cookies you have to sell in order to make no profit.

6. The y-intercept represents how much money you make when you haven’t sold any cookies.

7. Answers may vary. The y-intercept is important because it tells you how much money you spent on supplies for your cookies. The x-intercept is important because it tells you how many cookies you have to sell in order to break even. Any cookies sold after that point will result in a profit.