

Problem Set (Section 4.1)

- 1) Find the slope between the points (1,1) and (3,5)
- 2) Find the slope between the points (0,0) and (4,5)

Given the equation, find the slope and y-intercept.

3) $y = \frac{3}{4}x - 2$

4) $3x + 4y = 6$

5) $2x - 3y = 6$

Graph the following equations

6) $y = 3x$

7) $y = x + 5$

8) $y = \frac{1}{4}x - 1$

9) $y = -6x$

Linear Models

10) The revenue of a company that makes backpacks is given by the formula $R = 34.50x$ where x represents the number of backpacks sold.

- a) Graph the linear model $R = 34.50x$
- b) Use the model to calculate the revenue for selling 40 backpacks?
- c) What is the slope of the model?
- d) What is the meaning of the slope?

11) A salesperson is paid \$100 plus \$30 per sale each week. The model $S = 30x + 100$ is used to calculate the salesperson's weekly salary where x is the number of sales per week.

- a) Graph $S = 30x + 100$
- b) Use the model to calculate the salespersons weekly salary if he/she makes 8 sales.
- c) What is the slope of the equation?
- d) What is the meaning of the slope?