

# Reteaching 6-2

## Slope-Intercept Form

**OBJECTIVE:** Using the slope and y-intercept to draw graphs and write equations

**MATERIALS:** Graph paper, counters, ten index cards

Write these numbers on the index cards, one number to a card: 1, -1, 2, -2,  $\frac{1}{2}$ ,  $-\frac{1}{2}$ , 3, -3,  $\frac{1}{3}$ ,  $-\frac{1}{3}$ . These numbers represent different slopes.

- Draw a coordinate plane on the graph paper.
- Put a counter at any integer on the y-axis. Choose one of the index cards.
- Use the y-intercept shown by the counter and the slope shown on the card to write the equation of a line.
- Draw the graph of that line.

### Example

Place the counter at -4. Choose the index card with the number 2.

$$y = mx + b$$

← Write the slope-intercept form of the equation of a straight line. The counter shows that  $b = -4$ . The first card gives a slope of 2, so  $m = 2$ .

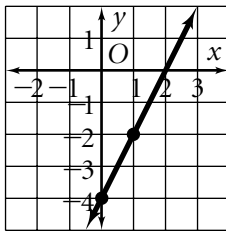
$$y = 2x + (-4)$$

← Substitute the values shown by the counter and the card.

$$y = 2x - 4$$

← Write the equation of the line in simplified form.

← Slope =  $\frac{\text{vertical change}}{\text{horizontal change}}$ , so rewrite 2 as  $\frac{2}{1}$ . Starting at the counter, move 2 units up and 1 unit to the right and place a second counter. Draw a straight line joining the two points for the graph of  $y = 2x - 4$ .



### Exercises

Place the counter. Then choose an index card.

1. Write the equation of the line.
2. Draw the graph.

Write an equation for each line.

