Writing Equations of Lines

For Use With Lesson 6-4

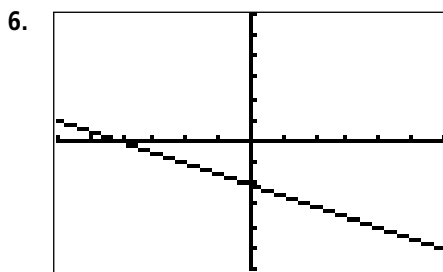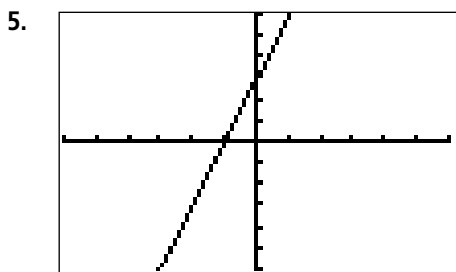**FILES NEEDED:** Guess My Coefficients App

In this activity you practice writing equations of lines in both slope-intercept form $y = mx + b$ and standard form $ax + by = c$.

Write a description of the graph of each equation.

1. $y = 3x + 5$ **2.** $y = -2x - 1$ **3.** $y = 7$ **4.** $x = -2$

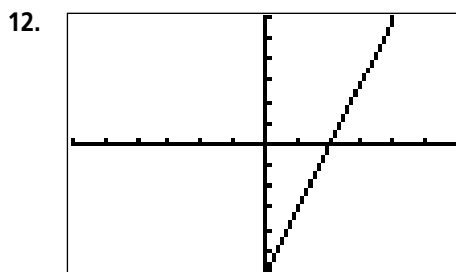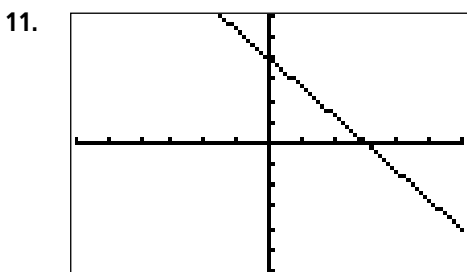Write an equation for each graph shown below. Use $y = mx + b$ form.
The scale on each axis is marked in unit intervals.
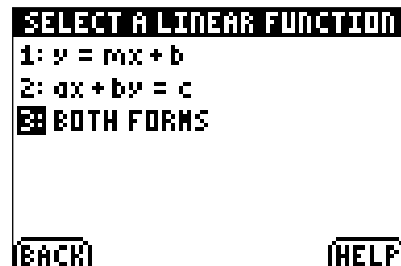
5.

6.

Find the *x*- and *y*-intercepts for each line given below. On graph paper, use the intercepts to locate two points of the graph. Then draw the graph.

7. $2x + 3y = 6$ **8.** $x - 2y = 4$ **9.** $4x + 2y = 4$ **10.** $-2x - 3y = 6$

Write an equation for each graph given below. Use $ax + by = c$ form.

11.

12.

13. For more practice, run the Guess My Coefficients (**GuesCoef**) App. Play the **BOTH FORMS** version of the **LINEAR** game.

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SELECT A LINEAR FUNCTION
1: y = mx + b
2: ax + by = c
3: BOTH FORMS



BACK                HELP
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Writing Equations of Lines

Activity Objective

Students use the Guess My Coefficients App to practice writing equations of lines in slope-intercept form, $y = mx + b$, and standard form, $ax + by = c$.

Correlation to Text

- Lesson 6-4: Point-Slope Form and Writing Linear Equations

Time

- 15–25 minutes

Materials/Software

- Guess My Coefficients App
- Activity worksheet

Classroom Management

- Students can work individually or in pairs depending on the number of calculators available.

Notes

- Students can review Lesson 6-3 if they need help with standard form.

Answers

1–4. Answers may vary. Samples are given.

1. a line with slope 3 and *y*-intercept 5

2. a line with slope –2 and *y*-intercept –1

3. a horizontal line through $(0, 7)$

4. a vertical line through $(–2, 0)$

5. $y = 3x + 3$

6. $y = -\frac{1}{2}x - 2$

7-10. Check that students' graphs have the correct intercepts.

7. $(3, 0), (0, 2)$

8. $(4, 0), (0, -2)$

9. $(1, 0), (0, 2)$

10. $(-3, 0), (0, -2)$

11. $4x + 3y = 12$

12. $6x - 2y = 12$

13. Check students' work.