Name _____ Date _____

LESSON 3.3

Challenge Practice

For use with the lesson "Graph Using Intercepts"

In Exercises 1–7, write an equation of the line with the given *x*- and *y*-intercepts.

Example: *x*-intercept: 5
y-intercept: 4

Solution: Multiply $5 \cdot 4 = 20$.
The equation is $4x + 5y = 20$.

1. *x*-intercept: 7, *y*-intercept: 2
2. *x*-intercept: 3, *y*-intercept: 1
3. *x*-intercept: 2, *y*-intercept: 2
4. *x*-intercept: 3, *y*-intercept: -3
5. *x*-intercept: 2, *y*-intercept: b
6. *x*-intercept: a, *y*-intercept: -4
7. *x*-intercept: a, *y*-intercept: b
8. Does the process used in Exercises 1–7 always work? If not, what intercept values cause the process to fail?

In Exercises 9–11, use the following information.

Mary is taking an exam consisting of multiple choice problems and essay problems. It takes Mary 1 minute to complete a multiple choice problem and 5 minutes to complete an essay problem. She has one hour to complete the exam.

9. Using x to represent the number of multiple choice problems and y to represent the number of essay problems, write an equation to show the relationship between how many multiple choice problems and how many essay problems Mary can complete in one hour.
10. What is the *x*-intercept of the equation found in Exercise 9? What does this *x*-intercept represent?
11. What is the *y*-intercept of the equation found in Exercise 9? What does this *y*-intercept represent?