Lesson 7.2: General Form of a Linear Equation

Complete the *Practice* below. When you have completed all the questions for *Lesson 7.2 Practice – II* with your best work, mark your work by first comparing your answers to the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.
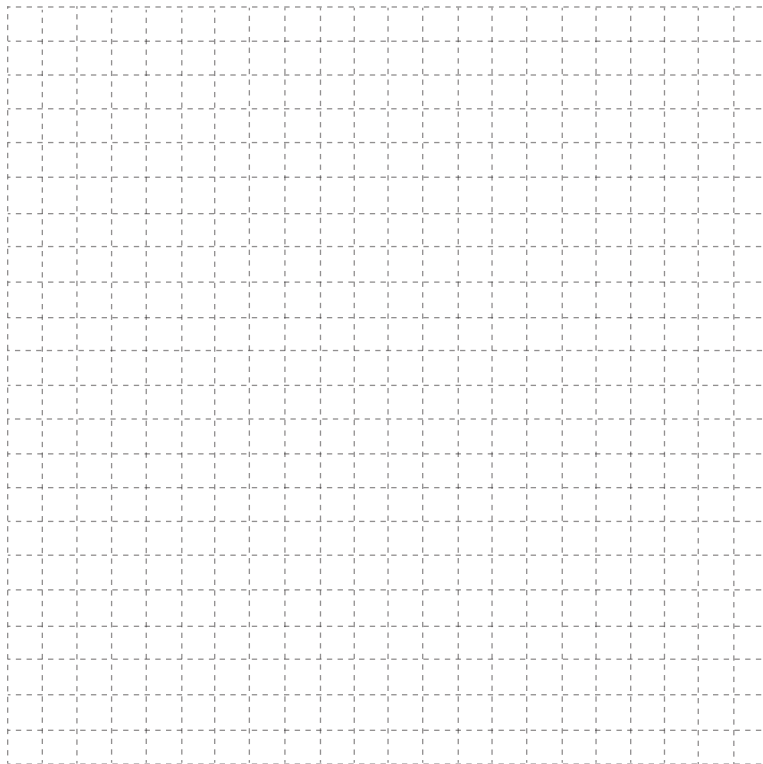
Practice – II

1. Rewrite each of the following equations in general form, $Ax + By + C = 0$.

    a. $y = -3x - 6$

    b. $y = \dfrac{2}{3}x - 7$

2.   Sketch the graph of $x = -5$.

3.   The y-axis can be represented by the equation $x = 0$.

    a. What is the x-intercept of the y-axis?

    b. The line $x = 0$ has an infinite number of y-intercepts. Explain what this means.

4.   State the equation of vertical line that passes through the point $(5, -7)$.

5. Pravin is planning a garden of tomatoes and pumpkins. His garden has a total area of 300 ft². Pravin writes the following equation to represent the number of plants he can include.

$$4t + 25p = 300$$

a. Explain what you expect each term of Pravin's equation to represent.

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b. If Pravin plans to plant 30 tomato plants, how many pumpkin plants can he use?

6. Ryan says that he can graph a linear relation that is in general form without using x and
    y-intercepts. Below is his work showing how to graph $4x - 6y - 48 = 0$ using this strategy.

$$4x - 6y - 48 = 0$$
$$4(3) - 6y - 48 = 0$$
$$12 - 6y - 48 = 0$$
$$-36 - 6y = 0$$
$$-6y = 36$$
$$y = -6$$

$$4x - 6y - 48 = 0$$
$$4(9) - 6y - 48 = 0$$
$$36 - 6y - 48 = 0$$
$$-12 - 6y = 0$$
$$-6y = 12$$
$$y = -2$$
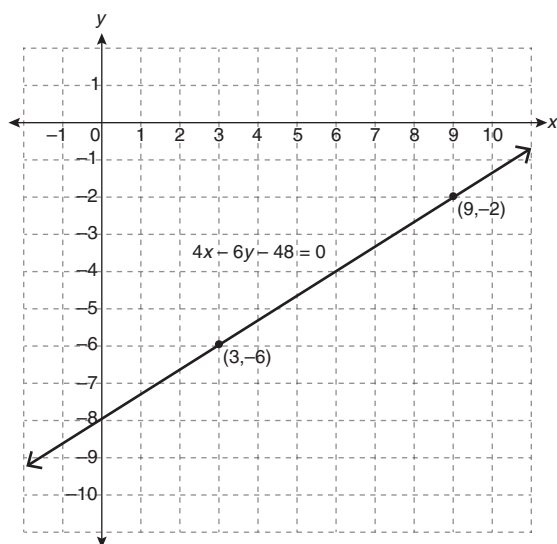
a. Explain Ryan's strategy.

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b. Give a reason people might prefer to use the intercepts instead of Ryan's method.

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7. Galaxy High School students want to raise $1 200 to support their student government activities. They sell sweatshirts for a profit of $5.75 and t-shirts for a profit of $3.50.

    a. Write a linear equation that represents the number of each type of shirt needing to be sold to reach their goal.

    _____

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    b. State the domain and range of the graph of the relation, if the students plan to stop selling once they have raised $1 200.
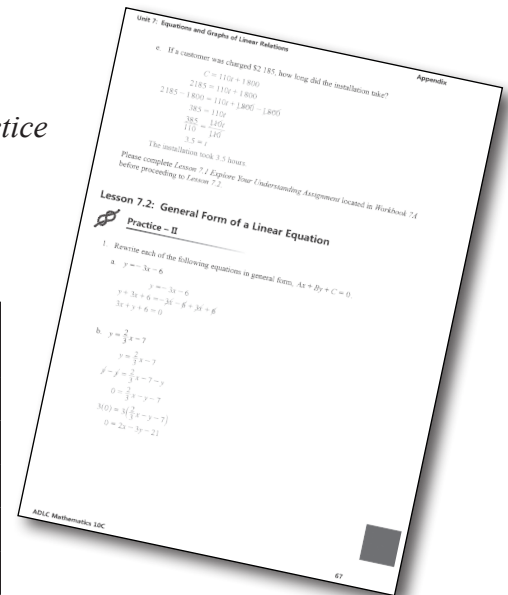
Mark your work for *Lesson 7.2 Practice – II* using the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

Transfer your self-assessed mark to the front cover of the *Workbook*.

My self-assessed mark on *Lesson 7.2 Practice – II* is _____.

Reflect on your understanding of the concepts addressed in the *Practice* exercises in the table provided.

Question Number	Got it!	Almost there…	Need to retry or ask for help.
1			
2			
3			
4			
5			
6			
7			

You may proceed to *Explore Your Understanding Assignment* on the next page of this *Workbook*.

Note: Before you complete *Explore Your Understanding*, you may review your skills and get more practice by completing the following problems in *Mathematics 10*.

- Page 365, #1, 2a, 2d, 3c, 3g, 4, 5, 6, 8, 11, and 14

Check your work in *Enhance Your Understanding*.