Unit 4 HW 13 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve to find the x-intercepts by factoring.**

1. $y=x^{2}+10x+21$ 2. $y=3x^{2}-33x+72$ 3. $ y=2x^{2}-7x-22$

x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve to find the EXACT x-intercepts by completing the square and identify the vertex.**

4. $y=x^{2}-6x+7$ 5. $ y=x^{2}+12x+18$

x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Solve the system of equations using any method

(substitution, elimination, or graphing).

$$\left\{\begin{matrix}y=2x+5\\3x+2y=-4\end{matrix}\right.$$

**Find the APPROXIMATE x-intercepts of each quadratic using either by factoring or completing the square.**

|  |  |
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| 1. $y=x^{2}-18x-88$
 | 1. $y=x^{2}+8x-44$
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1. **Circle** the method that you used for question “7” (above): Factoring Completing the Square

Explain: Why would you choose this method for this particular question?

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1. **Circle** the method that you used for question” 8” (above): Factoring Completing the Square

Explain: Why would you choose this method for this particular question?

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