**College Algebra**
**Weekly Quiz 2**

**Name:**_____

**No Work ⇔ No Points**

**Use Pencil Only ⇔ Be Neat & Organized**

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**1. (4 points) Solve by elimination method.**

$$\begin{cases} x^2 - 2y^2 = 4 \\ x^2 + y^2 = 4 \end{cases}$$

**1.** _____

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**2. (4 points) Solve by substitution method.**

$$\begin{cases} y = x^2 - x - 1 \\ 3x - y = 4 \end{cases}$$

**2.** _____

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**3. (4 points) Solve.**

$$\begin{cases} y = x^3 + 4x^2 - 3x - 5 \\ y = 2x^2 - 2x - 3 \end{cases}$$

**3.** _____

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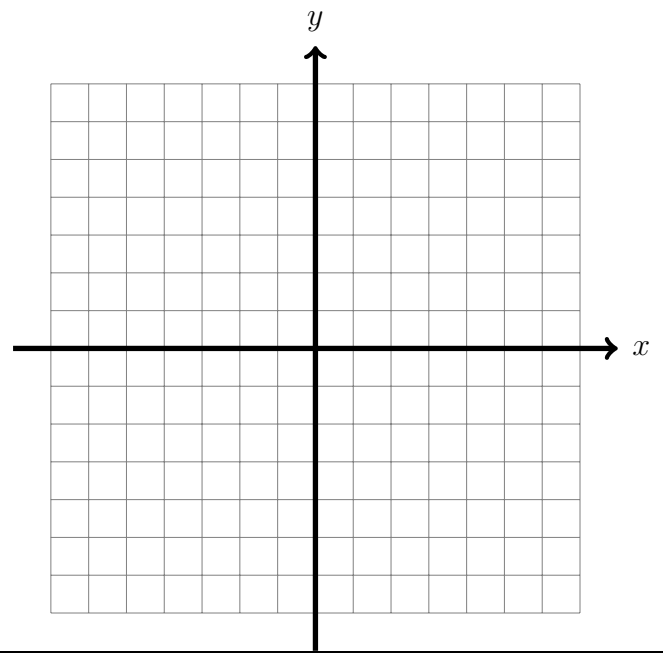
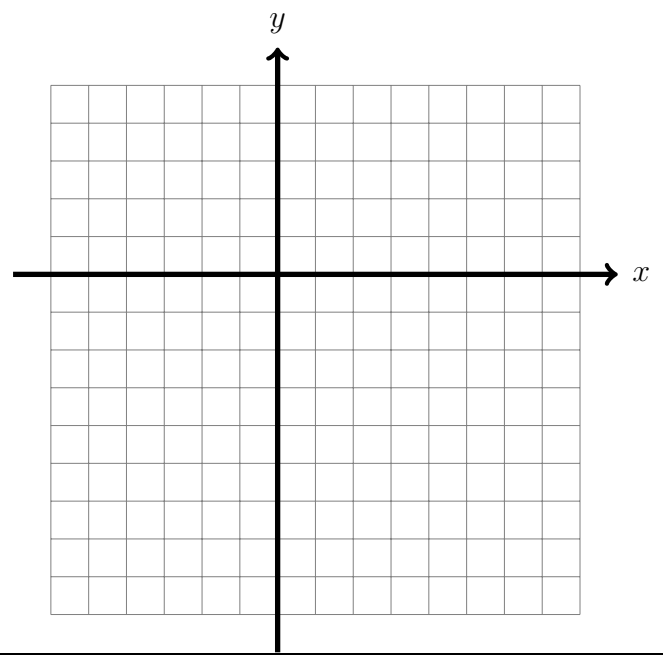
**4. (4 points) Graph and shade the solution for the system given below in the same coordinate system.**

$$\begin{cases} y > x^2 - 4 \\ y \leq \dfrac{2}{3}x + 1 \end{cases}$$




**5. (5 points) Graph and shade the solution for the system given below in the same coordinate system.**

$$\begin{cases} y > -x - 4 \\ y \leq \sqrt{x+4} \\ x \leq 2 \end{cases}$$



**6. (8 points) Solve:**

$$\begin{cases} x + 2y + z = 4 \\ 2x - y - 2z = -5 \\ 3x + y - z = -1 \end{cases}$$

**6.** _____

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**7. (5 points) Find the partial composition decomposition:** $\dfrac{6x-7}{x^2+x-6}$

**7.** _____

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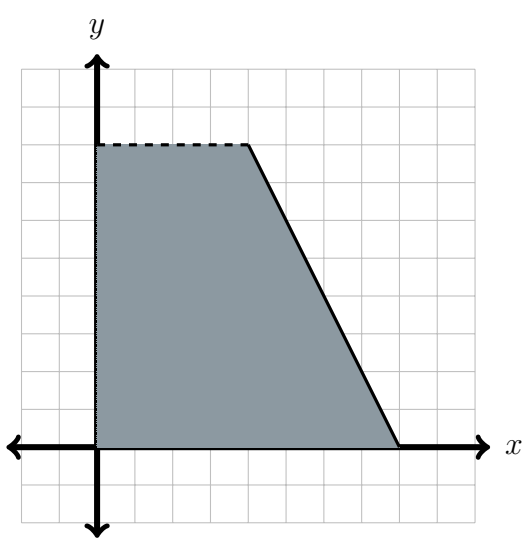
**8. (8 points) Find the partial composition decomposition:** $\dfrac{-3x^2+2x+8}{x^3+4x^2+4x}$

**8.** _____

**9. (8 points) Find a system of linear inequalities that satisfies the following shaded region.**




**9.** _____