

## January 9 Agenda

1. Check Homework
2. Review 2 questions from yesterday
3. Review of Systems of Equations
4. In class Assignment

2. Review of Questions from  
yesterday

Distance

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Midpoint

$$\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

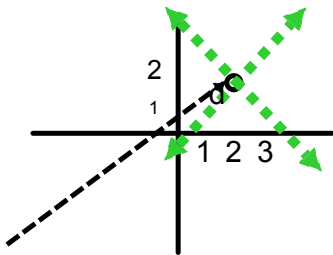
$$\begin{array}{l} \overset{y_1}{3}, \overset{y_2}{-5} \\ (3, 3) \quad (-1, -5) \\ \hline \frac{3 + (-1)}{2}, \frac{3 + (-5)}{2} \\ \hline \frac{2}{2}, \frac{-2}{2} \end{array}$$

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### 3. Review of Systems of Equations

1.



Solution = (2, 2)

2. Substitution

$$-2x - 6y = 16 \quad (\text{Plug the equation in})$$

$$y = 4x + 19$$

New Equation:  $-2x - 6(4x + 19) = 16$

$$-2x - 24x - 114 = 16$$

$$-2x - 24x = 16 + 114$$

$$\begin{array}{r} -26x = 130 \\ \hline -26 \quad -26 \end{array}$$

$x = 5$  (Plug in to original equation)

$$\begin{array}{r} 59 \\ 6 \\ \hline 114 \end{array}$$

(x, y)

### 3. Review of Systems of Equations

Elimination Method

(Goal: \*\*\*To have 2 X values which add to give me 0)

$$\begin{array}{r} -6x - 9y = 21 \\ + \quad -4x - 4y = -4 \\ \hline \end{array}$$

Hint: If I multiply my two x values together, what will my answer be?

$$24 + (-24) = 0$$

1)  $-4(-6x - 9y = 21)$

2)  $6(-4x - 4y = -4)$

1)  $24x + 36y = 84$

2)  $-24x + -24y = -24$

$$\begin{array}{r} \cancel{24x} + 36y = 84 \\ - \cancel{24x} - 24y = -24 \\ \hline 12y = 108 \\ \hline y = 9 \end{array}$$

In Class Assignment

