

3.2 Solving Systems of Equations Algebraically

- 1) Solve systems of equations by substitution,
- 2) Solve systems of equations by elimination.

Solve by substitution:

$$x + 2y = 8 \text{ and } \frac{1}{2}x - y = 18$$

Solve one equation for x or y and plug it into the other equation.

Solve by substitution:

$$4c + 2d = 10 \text{ and } c + 3d = 10$$

Solve by elimination:

$$4a + 2b = 15 \text{ and } 2a + 2b = 7$$

In elimination, you eliminate one of the variables by adding or subtracting the equations.

$$4a + 2b = 15$$

$$\underline{2a + 2b = 7}$$

Solve by elimination:

$$3x - 7y = -14 \text{ and } 5x + 2y = 45$$

Homework

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