Section 9.1: Systems of Equations

Video 1

1) Solve.

$$\begin{aligned} 3x + 4y &= 5 \\ x - 5y &= 27 \end{aligned}$$

2) Solve.

$$y = 3x - 4$$
$$6x - 2y = 5$$

Video 2

3) Solve.

$$5x - 4y = 20$$
$$3x + 2y = 34$$

4) Solve.

$$3x + 4y = 21$$
$$5x - 6y = -41$$

5) Solve.

$$8x + 10y = 34$$
$$12x + 15y = 51$$

Video 3

6) A youth baseball manager bought 4 baseball bats and 12 baseball gloves for $580.

The manager bought 3 more bats and 5 more gloves for $275.

How much does each bat and glove cost?

7) The average salary of a college's president and vice-president is $240,000.

The president's salary is $30,000 more than twice the vice-president's salary.

Find each salary.

Video 4

8) Solve.

$$\begin{aligned} 3x + 4y - 2z &= 14 \\ 3x + 2y + 3z &= -12 \\ x - y + z &= -9 \end{aligned}$$

Video 5

9) Solve.

$$4x + y - 2z = 24$$
$$3x - 2y + z = 20$$

Video 6

Find the equation of a line that passes through $(5,44)$, $(2,14)$, and $(-3,4)$.

Video 7

The following table shows how many units of protein, fat, and fiber there are in 1 unit of corn, soybean, and cottonseed meal.

	Corn	**Soybean**	**Cottonseed**
Protein	0.25	0.4	0.2
Fat	0.4	0.2	0.3
Fiber	0.3	0.2	0.1

How many units of each of the 3 feeds will produce 35 units of protein, 38 units of fat, and 28 units of fiber?