

6.1-6.3 Quiz Review

Solve the system of equations.

1.
$$\begin{cases} x + 7y = 50 \\ x^2 + y^2 = 100 \end{cases}$$

2.
$$\begin{cases} 2a = 2 - 3b \\ 6b + 4a = 7 \end{cases}$$

3.
$$\begin{cases} x^2 + y^2 = 65 \\ y = 3x + 25 \end{cases}$$

4.
$$\begin{cases} 3x^2 + 3y = 39 \\ x^2 + y^2 = 25 \end{cases}$$

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

6.
$$\begin{cases} 2x - 3y + 2z = 0 \\ 3x - 4y + z = -20 \\ x + 2y - z = 16 \end{cases}$$

7.
$$\begin{cases} 2x + 5y = 11 \\ 8x - y = 2 \end{cases}$$

8.
$$\begin{cases} x = -6y + 24 \\ 2x - 5y = -3 \end{cases}$$

9. Find the quadratic equation of the form $y = ax^2 + bx + c$ whose graph passes through the points $(2, -3)$, $(4, -15)$ and $(-2, -27)$.

10. Airport walkways: As part of an algebra field trip Jason takes his class to the airport to use their moving walkways for a demonstration. The class Measures the longest walkway, which turns out to be 256 feet long. Using a stop watch, Jason shows it takes him just 32 seconds to complete the walk going the same direction as the walkway. Walking in a direction opposite the walkway, it takes him 320 seconds – 10 times as long! What is Jason's walking speed and the speed of the walkway?

11. Find the quadratic equation of the form $y = ax^2 + bx + c$ whose graph passes through the points $(2, -6)$, $(6, -10)$ and $(-2, 14)$.