

9.1 Systems of Linear Equations
Honors Algebra 2 with Trig

1. Solve the system using substitution

$$-4x + 3y = 1$$

$$3x + y = 10$$

2. Solve the system using elimination (also known as linear combination)

$$3x - 5y = 25$$

$$2x + 4y = 2$$

3. A rectangular lot whose perimeter is 320 feet is fenced along three sides. An expensive fencing along the lot's length costs \$16 per foot, and an inexpensive fencing along the two widths costs only \$5 per foot. The total cost of the fencing along the three sides is \$2140. What are the lot's dimensions?

4. Solve the system of three equations

$$x + 2y - 3z = 50$$

$$2x + y + 2z = 3$$

$$2x - 5y + 4z = -79$$

5. Solve the system of three equations

$$7z - 3 = 2(x - 3y)$$

$$5y + 3z - 7 = 4x$$

$$4 + 5z = 3(2x - y)$$

6. Solve the system of three equations

$$x + 3z = -5$$

$$5x - 2y = -22$$

$$5y - 6z = 36$$

7. Find the quadratic equation $y = ax^2 + bx + c$ whose graph passes through the given points. $(-2, 7)$, $(1, -2)$, $(2, 3)$.