STATION 1

Jasmine shot a basketball with an initial upward velocity of 20 feet per second. When she shot the ball her hands were 6 feet off the gym floor.

a. Write an equation to represent the situation.

b. What is the maximum height the ball will reach?

c. How long does it take the ball to reach the maximum height?

d. When will the ball hit the ground?

e. What is the initial height of the ball when it was shot at the basket?

STATION 2

Solve using the Quadratics Formula:

a. $0 = x^2 - 2x + 13$

b. $2x^2 + x = 14$

STATION 3

Solve by Factoring:

b. $121x^2 - 66x + 55 = 0$

b. $x^2 - 6x + 9 = 0$

c. $4x^2 - 4x + 1 = 0$

STATION 4

Solve using Square Roots:

c. $\sqrt{2x-12} = \sqrt{3x-13}$

b. $x^2 - 72 = 0$

c. $\sqrt{x} - 13 = 12$

STATION 5

Multiply each expression in equivalent standard form $ax^2 + bx + c$. Show work to receive full credit.

a. $(x + 7)(2x + 11)$

b. $(x - 1)(x + 9)$

c. $9x(9 - 2x)$

STATION 6

Identify the following for each equation, and provide a graph.

a. $y = x^2 - 4x - 12$

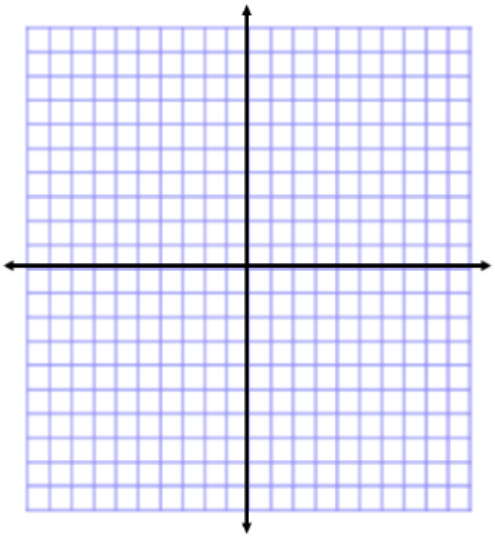
y- intercept_____

Vertex_____

Axis of Symmetry_____

Domain_____

Range _____



b. $y = x^2 + 3x - 10$

y- intercept_____

Vertex_____

Axis of Symmetry_____

Domain_____

Range _____