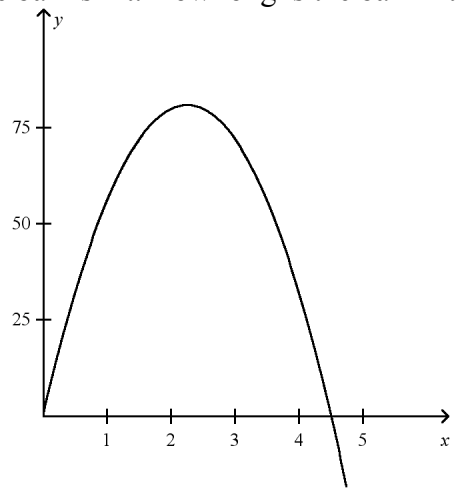
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Alg Mini MA912A71 Form A

____ 1 If you graph $y = x^2 - 6x + 9$, the y-intercept of the graph of the equation is _____.

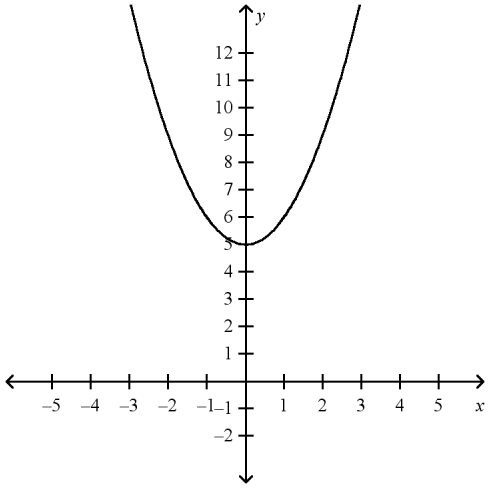
A. -3
B. 9
C. 2
D. 0

____ 2 The height of a ball in feet is modeled by $y = -16x^2 + 72x$, where x is the time in seconds after the ball is hit. How long is the ball in the air?



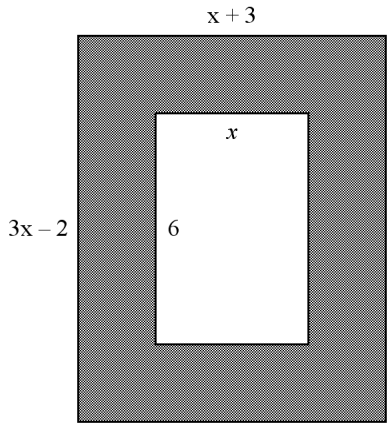
A. 2.25 s
B. 4.5 s
C. 9 s
D. 81 s

____ 3 Find the real zero(s) of $y = x^2 + 5$ from its graph below.



A. 0
B. 5
C. 0 and 5
D. no real zeros

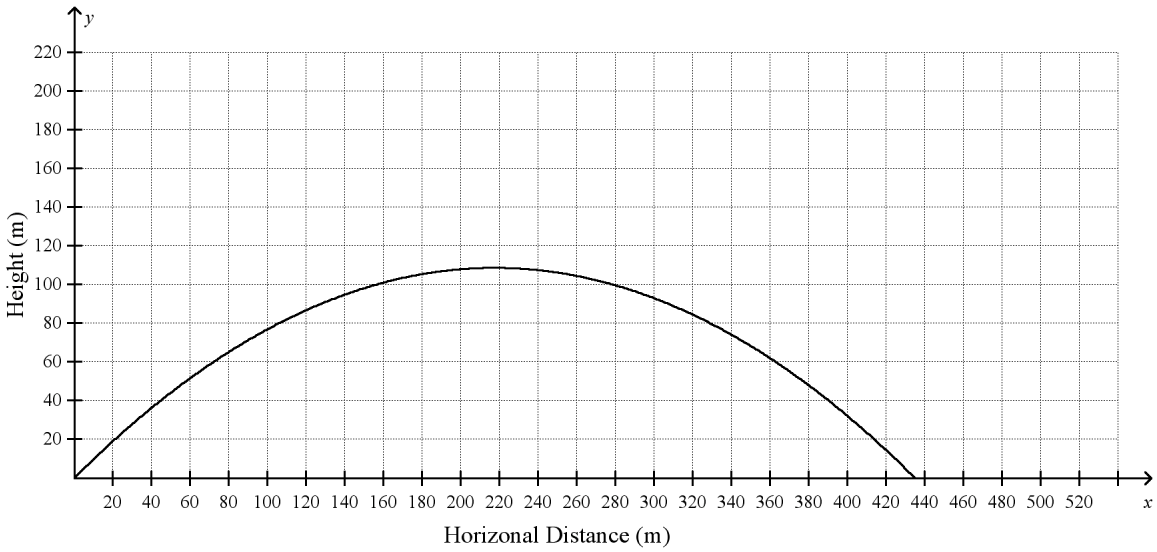
____ 4 The city of Plantation plans to build a new community park with a public swimming pool. The diagram below shows the area of the proposed swimming pool and the stone deck that will surround it.



If the area of the deck region is 24 square units, find the value for x.

A. $x = 2$ units
B. $x = 3$ units
C. $x = 4$ units
D. $x = 5$ units

____ 5 The trajectory of a potato launched from a potato cannon on the ground at an angle of 45 degrees with an initial speed of 65 meters per second can be modeled by the parabola: $f(x) = x - 0.0023x^2$, where the x-axis is the ground. Find the height of the highest point of the trajectory and the horizontal distance the potato travels before hitting the ground.



A. height: 109 m; distance: 435 m
B. height: 121 m; distance: 418 m
C. height: 118 m; distance: 421 m
D. height: 102 m; distance: 409 m