

Exam # 2 Math 1220 Spring 2020

Name _____

Show all work to receive full credit
Each problem is worth 4 points

Solve the equation.

1) a) $x^2 = -121$

b) $(x - 5)^2 = 11$

Solve the equation.

2) $x^2 + 15x + 50 = 0$

Solve the equation.

3) $2x^2 + 5x + 6 = 0$

solve the equation.

4) $x^2 + x + 4 = 0$

Graph of the parabola and Give the vertex, axis, domain and range. (for problems 5–8)

5) $f(x) = (x + 3)^2$

6) $f(x) = x^2 + 2x + 1$

Graph the parabola.

7) $f(x) = -4x^2 + 2x + 1$

8) $f(x) = -2(x - 4)^2 - 3$

Solve the problem. Round your answer to the nearest tenth, when appropriate.

- 9) A toy rocket is shot vertically upward from the ground. Its distance in feet from the ground in t seconds is given by $s(t) = -16t^2 + 64t$. At what time or times will the ball be 48ft from the ground?

Solve the problem.

- 10) A projectile is thrown upward so that its distance (in feet) above the ground after t seconds is given by $h(t) = -10t^2 + 240t$. What is its maximum height and the number of seconds it takes to reach that height?