

Alg 2 5.1-5.5 Quiz Review

Name _____ hr _____

Simplify.

- 1) $(3 + 4i) - (8 - 5i)$ 2) $(6 - 2i) + (3 + 4i)$ 3) $(5 - 6i)(3 + 2i)$ 4) $(-2 + 4i)(1 - 3i)$

5). A rock club's profits, p , can be modeled by the function $p = -15x^2 + 600x + 50$, where x represents the ticket price in dollars.

Define variables $x =$ _____ $y =$ _____

Draw a sketch of the graph and find the following:

- Find the maximum profit.
- Find the ~~amount~~ ^{price} of tickets needed to obtain the maximum profit.
- What is the maximum price they could charge?
- What is a reasonable domain and range?

6) Suppose you hit a baseball and its flight takes a parabolic path. The height of the ball at certain times appears in the table.

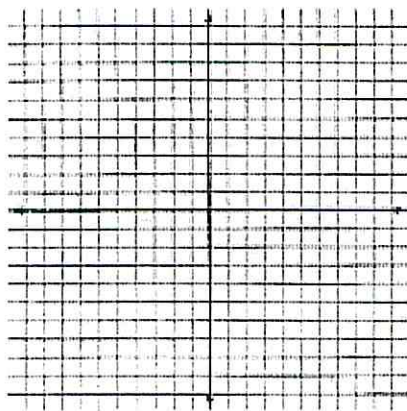
Time (sec)	0.	0.75	1	1.25
	5			
Height (ft)	10	10.5	9	5.5

Draw a sketch of graph and define variables. $x =$ _____ $y =$ _____

- Write a quadratic model for the data.
- Find the height of the ball after 1.1 seconds.
- At what time is the ball 6 ft high?

7) Given the equation $y = x^2 - 4x - 5$, find the following:

- Find axis.
- Find vertex
- Find y intercept
- Find x intercepts
- Graph



Solve by factoring

- 8) $3x^2 - 14x - 5 = 0$ 9) $x^2 + 3x - 10 = 0$ 10) $5x^2 + 3x = 0$ 11) $2x^2 - 50 = 0$