

Quiz/Test DATE:

Today's Section:

# Algebra I 100pt Daily Path to Success

Full Student Name:

1/2 5/6 7/8

Date:

## Opening Checklist (15 points)

Initials

1. I had my math notes folder and daily papers ON MY DESK by the time class began.

/5

2. I had been using a SHARPENED pencil by the time class began.

/5

3. I had FINISHED copying the objective and had STARTED defining the Word of the Day by the time class began.

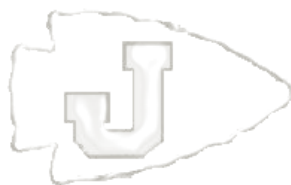
/5

## Do Now (10 points) – Copy the Objective and define the Word of the Day.

Initials

Obj:

Word of  
the Day  
& Defn:



/10

## Skill Review (10 points) – Show ALL work necessary.

Initials

/10

## Notes/Activity (20 points)

Initials

Completed Notes Page/Activity

/10

Participated Productively & Earned the Appropriate Number of Teacher Checkmarks

/10

## Exit Ticket (10 points) – Complete INDEPENDENTLY and SILENTLY.

Initials

/10

Use your graphing calculator to sketch the graph of the parabola and find the key features.

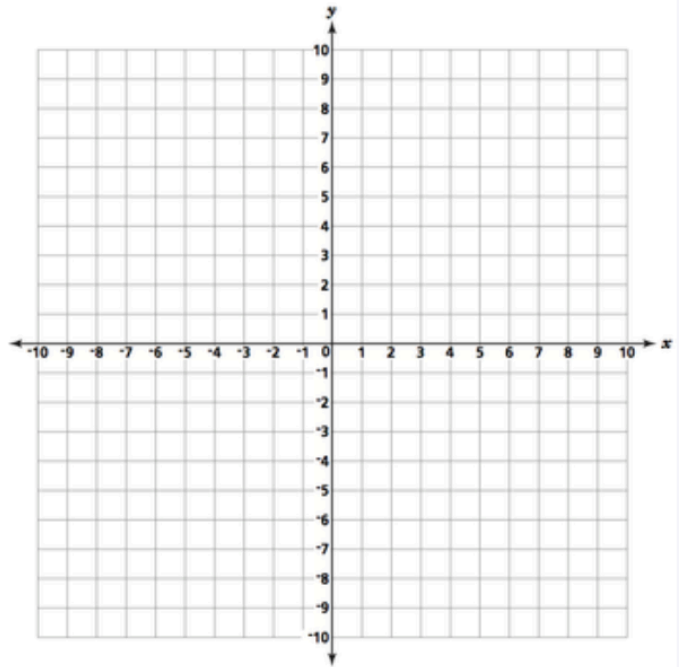
1)  $f(x) = x^2 - 6x + 7$

Vertex:

AOS:

x-intercepts:

y-intercept:



Use your graphing calculator to answer the real-world application questions.

2) The barber's profit  $p$  each week depends on his charge  $c$  per haircut. It is modeled by the equation  $p = -200c^2 + 2400c - 4700$ .

- a. What price should he charge for the largest profit?
- b. What is that maximum profit?

3) The path of a baseball after it has been hit is modeled by the function  $h = -0.0032d^2 + d + 3$ , where  $h$  is the height in feet of the baseball and  $d$  is the distance in feet the baseball is from home plate.

- a. What is the maximum height reached by the baseball?
- b. How far is the baseball from home plate when it reaches its maximum height?
- c. If the baseball is never caught in the outfield, how long until it falls to the ground?

4) A skating rink manager finds that revenue  $R$  based on an hourly fee  $F$  for skating is represented by the function  $R = -480F^2 + 3120F$ .

- a. What hourly fee will produce maximum revenues?
- b. What is that maximum revenue?

### Skill Review

Find the vertex, (h, k) by using  $h = \frac{-b}{2a}$  and then plugging in h to find k.

1)  $y = x^2 + 2x - 2$       3)  $y = -x^2 - 2x + 3$

2)  $f(x) = 2x^2 + 4x + 1$     4)  $y = -2x^2 - 8x - 5$

### Exit Ticket

The equation  $h = 40t - 16t^2$  describes the height h, in feet, of a ball that is thrown straight up as a function of the time t, in seconds, that the ball has been in the air.

- a. At what time does the ball reach its maximum height?
- b. What is the maximum height?