

Math 32 Quiz 3  
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Name: \_\_\_\_\_

1. Let  $f(x) = -x^2 + 8x - 11$ .
  - (a) Graph  $f$ .
  - (b) Does  $f$  have a minimum, a maximum, both, or neither?
  - (c) If  $f$  has a minimum or maximum, find the  $x$  and  $y$  coordinates of that min or max.

2. Find the equation of the line that contains the points (2,-1) and (4,9).

3. Write  $27^{4000}$  as a power of 3.

4. Simplify the following expression by writing it as a power of a single variable:

$$t^4(t^3(t^{-2})^5)^4$$

5. True or False?

$$(x + y)^2 = x^2 + y^2$$