### Lesson 9 Practice Problems

1. Find **all** the solutions to each equation.
2. Rewrite each equation in factored form and solve using the zero product property.
3. Here is how Elena solves the quadratic equation .

* Is her work correct? If you think there is an error, explain the error and correct it.
* Otherwise, check her solutions by substituting them into the original equation and showing that the equation remains true.

1. Jada is working on solving a quadratic equation, as shown here.

* She thinks that her solution is correct because substituting 5 for in the original expression gives , which is  or 0.
* Explain the mistake that Jada made and show the correct solutions.

1. Choose a statement to correctly describe the zero product property.

* If and are numbers, and , then:
  1. Both and must equal 0.
  2. Neither nor can equal 0.
  3. Either or .
  4. must equal 0.
* (From Unit 7, Lesson 4.)

1. Which expression is equivalent to ?

* (From Unit 7, Lesson 6.)

1. These quadratic expressions are given in standard form. Rewrite each expression in factored form. If you get stuck, try drawing a diagram.

* (From Unit 7, Lesson 6.)

1. Select **all** the functions whose output values will eventually overtake the output values of function defined by .

* (From Unit 6, Lesson 4.)

1. A piecewise function, , is defined by this rule:

* Find the value of at each given input.
* (From Unit 4, Lesson 12.)



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