1. Give the definition of quadratic equation.

2. (a) Can a quadratic equation have no solution?  
   (b) Can a quadratic equation have only one solution?  
   (c) Can a quadratic equation have two solutions?  
   (d) Can a quadratic equation have more than two solutions?

3. (a) What does \( A^2 \) ("A squared") mean?  
   (b) What is the "opposite" operation (the "undo") called?

4. (a) If \( AB = 17 \), does that let you know the value of either number for certain?  
   If yes, what value(s) do you know?  If no, why not?  
   (b) If \( AB = 0 \), does that let you know the value of either number for certain?  
   If yes, what value(s) do you know?  If no, why not?

5. The quadratic equation below is not ready to solve using factoring.  
   \( x^2 + 26x = 120 \)  
   (a) What do you need to do to the equation to get it ready?  
   (b) Get the equation ready for factoring. Then, solve it using factoring.

6. The quadratic equation below is not ready to solve using factoring.  
   \( (w-4)(w-7) = 10 \)  
   (a) What do you need to do to the equation to get it ready?  
   (b) Get the equation ready for factoring. Then, solve it using factoring.

7. Each of the equations below is in the proper form for using the quadratic formula.  
   For each equation, give the values of the coefficients A, B, and C.  
   (a) \( 8x^2 - 97x + 37.2 = 0 \)  
   (b) \( x^2 + 98.6x + \frac{3}{4} = 0 \)  
   (c) \( 3p^2 + 21 = 0 \)  
   (d) \( 17.3R^2 - 6,000,000 = 0 \)  
   (e) \( z^2 - z - 42 = 0 \)

8. (a) Put this equation in the proper form for solving it using the quadratic formula.  
   \( 4z^2 = 29z + 7 \)  
   (b) Solve the equation using the quadratic formula.

9. Solve using any appropriate method: \( w^2 = 9 \)

10. Solve using any appropriate method: \( x^2 = 6x \)

11. Solve using any appropriate method: \( (y + 7)^2 = 11 \)  
   (a) Give exact answers ("radical" form).  
   (b) Give decimal approximations, rounded to the nearest thousandth.

12. Solve using any appropriate method: \( 3z^2 + 19z = 14 \)  
   (a) Give exact answers ("radical" form).  
   (b) Give decimal approximations, rounded to the nearest thousandth.