Pre-Calc. 11 LG 7A QUIZ (Formative Assessment)

Marking Teacher: _____ **Name:** _____

Student #: _____

Solve each equation by graphing the corresponding functions.

1. $x^2 + 3x - 18 = 0$

2. $3m^2 - m = -7$

3. $0 = -t^2 - 6t - 9$

4. Two numbers have a sum of 8 and a product 12.

   a) Write a single-variable quadratic equation that can be used to represent the product of the two numbers.

   b) Determine the two numbers by graphing the function.

5. A basketball is shot up into the air where its height, h in metres, as a function of time t, in seconds is modeled by the function $h(t) = -.5x^2 + 2x + 2$. How many seconds will it take for the ball to hit the floor?

6. Factor completely.

a) $x^2 - 2x - 15$ b) $4y^2 + 8y - 5$ c) $\frac{1}{2}n^2 + 2n - 6$

7. Factor each expression.

a) $(x + 5)^2 - (x + 5) - 20$ b) $(3d + 1)^2 - (1 - 3d)^2$

8. Solve each factored equation.

a) $(x - 8)(x + 1) = 0$ b) $4x(2x - 1) = 0$

9. Solve each quadratic equation by factoring. Check your answer.

a) $6b^2 - 54 = 0$ b) $\frac{1}{3}x^2 + \frac{8}{3}x + 4 = 0$

10. The area of a swimming pool is 120 m^2. The length is 7 m more than the width. What are the dimensions of the swimming pool?

Directions: ☐ **See me about this** ☐ **Move on to next guide** ☐ **Review and redo**

Pre-Calc. 11 LG 7B QUIZ (Formative Assessment)

Marking Teacher: _____ **Name:** _____

Student #: _____

Solve each equation by graphing the corresponding functions.

1. $x^2 + 5x + 4 = 0$

2. $2m^2 - m = -5$

3. $0 = t^2 + 4t + 4$

4. Two numbers have a sum of 11 and a product 28.

   a. Write a single-variable quadratic equation that can be used to represent the product of the two numbers.

   b. Determine the two numbers by graphing the function.

5. A hand-glider takes off into the air where its height, h in metres, as a function of time t, in seconds is modeled by the function $h(t) = -.025x^2 + 2.1x + 85$. How many seconds will it take for the glider to hit the ground?

6. Factor completely.

a) $x^2 - x - 12$ b) $2y^2 + 9y - 5$ c) $\frac{1}{2}n^2 + 3n - 8$

7. Factor each expression.

a) $(x - 1)^2 - (x - 1) - 6$ b) $(7c + 1)^2 - (1 - 7c)^2$

8. Solve each factored equation.

a) $(x - 3)(x + 9) = 0$ b) $-x(2x + 5) = 0$

9. Solve each quadratic equation by factoring. Check your answer.

a) $2b^2 - 18 = 0$ b) $\frac{1}{3}x^2 + \frac{8}{3}x - 3 = 0$

10. The length of a rugby pitch is 8 m less than twice the width. The area of the pitch is 5824 m^2. What are the dimensions of the rugby pitch?

Directions: ☐ **See me about this** ☐ **Move on to next guide** ☐ **Review and redo**