Name _____ Date _____ Class _____

TEKS 2A.8.B

LESSON 5-6

Practice B

The Quadratic Formula

Find the zeros of each function by using the Quadratic Formula.

1. $f(x) = x^2 + 10x + 9$

2. $g(x) = 2x^2 + 4x - 12$

3. $h(x) = 3x^2 - 3x + \frac{3}{4}$

4. $f(x) = x^2 + 2x - 3$

5. $g(x) = 2x^2 + 3x + 1$

6. $g(x) = x^2 + 5x + -3$

Find the type and number of solutions for each equation.

7. $x^2 - 3x = -8$

8. $x^2 + 4x = -3$

9. $2x^2 - 12x = -18$

Solve.

10. A newspaper delivery person in a car is tossing folded newspapers from the car window to driveways. The speed of the car is 30 feet per second, and the driver does not slow down. The newspapers are tossed horizontally from a height of 4 feet above the ground. The height of the papers as they are thrown can be modeled by $y = -16t^2 + 4$, and the distance they travel to the driveway is $d = 30t$.

a. How long does it take for a newspaper to land?

b. From how many feet before the driveway must the papers be thrown?

c. The delivery person starts to throw the newspapers at an angle and the height of the papers as they travel can now be modeled by $y = -16t^2 + 12t + 4$. How long does it take the papers to reach the ground now?

Name _____ Date _____ Class _____

TEKS 2A.8.B

LESSON 5-6

Practice B

The Quadratic Formula

Find the zeros of each function by using the Quadratic Formula.

1. $f(x) = x^2 + 10x + 9$

$x = -9, -1$

2. $g(x) = 2x^2 + 4x - 12$

$x = -1 \pm \sqrt{7}$

3. $h(x) = 3x^2 - 3x + \frac{3}{4}$

$x = 0.5$

4. $f(x) = x^2 + 2x - 3$

$x = -3, 1$

5. $g(x) = 2x^2 + 3x + 1$

$x = -1, -0.5$

6. $g(x) = x^2 + 5x + -3$

$x = \frac{-5 \pm \sqrt{37}}{2}$

Find the type and number of solutions for each equation.

7. $x^2 - 3x = -8$

Two nonreal solutions

8. $x^2 + 4x = -3$

Two real solutions

9. $2x^2 - 12x = -18$

One real solution

Solve.

10. A newspaper delivery person in a car is tossing folded newspapers from the car window to driveways. The speed of the car is 30 feet per second, and the driver does not slow down. The newspapers are tossed horizontally from a height of 4 feet above the ground. The height of the papers as they are thrown can be modeled by $y = -16t^2 + 4$, and the distance they travel to the driveway is $d = 30t$.

a. How long does it take for a newspaper to land?

0.5 s

b. From how many feet before the driveway must the papers be thrown?

15 ft

c. The delivery person starts to throw the newspapers at an angle and the height of the papers as they travel can now be modeled by $y = -16t^2 + 12t + 4$. How long does it take the papers to reach the ground now?

1 s