***Pre-Calculus 11***

***Unit 3: Solving Quadratic Equations***

***Worksheet 3.2 – Solving Quadratic Equations by Factoring***

1. Which equations are quadratic?

a) b)

c) d)

2. Solve each quadratic equation.

a) b)

c) d)

3. Solve by factoring.

a) b)

c) d)

4. Solve by factoring.

a) b)

c) d)

5. Solve by factoring.

a) b)

c) d)

6. Write an equation with the given roots.

a) b) c) d)

7. Solve by factoring.

a) b) c)

8. Find two consecutive integers with a product of 156.

9. What number and its square differ by 30?

10. \*The hypotenuse of a right triangle is 29 cm. If the other two sides differ by 1 cm, what are

their lengths?

11. \*When a football is kicked with a vertical speed of 20 m/s, its height, h metres, after t seconds

is given by the formula: .

How long after the kick is the football at a height of 15 m?

12. \*A rectangular garden has dimensions 6 m by 8 m. Leonard wants to build a path around the

garden. He has of bricks. How wide is the pathway?

13. Solve by factoring.

a) b)

c)

14. If one root is 5, find the value of k and the other root.

1. b)

c) d)

15. \*Solve for *x*.

1. b)

c) d)

16. Journal Prompt: When you solve a quadratic equation by factoring, why must one side of the equation be 0?

***Solutions***

1. a) b) c) d)

2. a) b) c) d)

3. a) b) c) d)

4. a) b) c) d)

5. a) b) c) d)

6. a) b) c) d)

7. a) b) c)

8.

9.

10.

11.

12.

13. a) b) c)

14. a) b) c) d)

15. a) b) c) d)