NAME:

**Unit 2: Quadratic Functions and Equations Final Review Assignment**



This assignment includes multiple choice and short answer questions. For multiple choice questions, select the best answer. Each is worth 1 mark. Marks assigned to short answer questions are indicated for each question. Be sure to show all necessary work.

**/4** *Match the Description with the correct Quadratic Function.*

**Description**

 1. Quadratic function with a range of
 

 2. Quadratic function with a vertex at
 

 3. Quadratic function with an axis of
 symmetry about the line 

 4. Quadratic function with one *x*-intercept

**Quadratic Function**

A. 

B. 

C. 

D. 

E. 

F. 

**/4** *Match the Description with the correct Quadratic Function.*

**Description**

 5. Quadratic function with zeros of 3 and
 

 6. Quadratic function whose graph has a
 *y*-intercept of 6

 7. Quadratic function whose graph has one
 *x*-intercept

 8. Quadratic function whose graph opens
 downward

**Quadratic Function**

A. 

B. 

C. 

D. 

E. 

F. 

**/2** 9. Convert the quadratic function  to vertex form by completing the square.

 Answer:

**/3** 10. The safe stopping distance, *d*, in metres, of a Harold Dobson motorcycle on wet pavement is
 given by the function, , where *s* is the speed of the motorcycle in
 metres per second. Find the speed at which the safe stopping distance is 50 m.

 Answer:

11. An object falls with an acceleration of m/s2. A function relating the height from
 which the object falls, the initial velocity of the object, and the time the object spends in the
 air is frequently used in physics.

 
 *V*0 = initial velocity

 *t* = time

 *a* = accleration due to gravity

 Lucy and Kim determine the height of a building by dropping a brick from its roof. The
 initial velocity is 0 m/s because Lucy simply lets go of the brick. Kim times the fall of the
 brick to be 3.5 seconds.

**/1** a. What is the height of the building?

 Answer:

**/3** b. Determine the amount of time the brick is in the air if Lucy throws the brick downward
 with an initial velocity of –5 m/s. Round to the nearest hundredth of a second.

 Answer:

**/17**