Name:

Height of Dropped Object

When an object is dropped, its height *h* in feet above the ground after *t* seconds can be modeled by the function:

***h* = -16*t*2 + *h*0** where *h*0 is the object’s initial height in feet.

1.) A cliff diver dives off a cliff 40 feet above the water. Write an equation giving the diver’s height *h* in feet above the water after *t* seconds. How long is the diver in the air?

2.) A penny is dropped from the top of a building that is 200 feet tall. Write an equation giving the penny’s height *h* in feet above the ground after *t* seconds. How long will it take for the penny to hit the ground?

3.) A ball is dropped from the top of a 15 foot ladder. Write an equation giving the ball’s height *h* in feet above the ground after *t* seconds. How long will it take for the ball to be 3 feet above the ground?