Name _____ Date _____

28	Kinematic Problems – Freefall
	$d=vt$ $v_f = v_i + at$ $d = v_i t + (½)at^2$
	$g = 9.8 \text{ m/s}^2$

1) A rock is dropped. It lands 8 s later. How far did it fall?

2) A Crayola© crayon is dropped. It lands 4 s later. How far did it fall?

3) A ball is dropped from a height of 35 m. How long did it take to land?

4) A stapler is dropped from a height of 2900 cm. How long did it take to land?

5) Mr. Kelly is fired into the air at a speed of 300 m/s. How long does it take for him to reach his high point?

6) How high did the person in problem 5 go?

7) An object is fired into the air at a speed of 50 m/s. How long does it take to reach its high point?

8) How high did the object go?

9) An object is fired straight into the air at 400 m/s. How high does it go?

10) An object was thrown straight down from a platform at an initial speed of 15 m/s. It hit the ground 2.4 s later. How high is the platform?

Answers 1) 313.6 m 2) 78.4 m 3) 2.67 s 4) 2.43 s 5) 30.6 s 6) 4.59 x 10^3 m 7) 5.10 s 8) 127.5 m 9) 8,160 m 10) 64.2 m