Kinematics Practice 5 37	Name _____

$d = vt$ $v_f = v_i + at$ $d = v_i t + (1/2)at^2$ $g = 9.8\ m/s^2$

Show all your work

1) An arrow is fired straight up into the air at an initial speed of 137.2 m/s. How long does it take to reach its high point?

How high does it go?

2) What is the acceleration of a gorilla that has an initial speed of 2 m/s and travels 45 m in 5 s?

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3) A person starts from rest and accelerates at 2 m/s^2 for 5 s. They run at their new speed for the next 10 s. Then, they decelerate at (-)2.5 m/s^2 until they come to a rest. How far did they travel all together?

Answers: 1) 14 s 960.4 m 2) 2.8 m/s^2 3) 145 m