

Wk 17 Motion Equations

1 Identifying Variables

Name: _____

In each of the situations below, identify the variables you are being given and what you are being asked for. **CROSS OUT THE VARIABLE THAT WAS NEVER MENTIONED.**

d	t	v_i	v_f	a

1. A car starting from rest, gets up to 20 m/s in 5 seconds. What was its acceleration?

d	t	v_i	v_f	a

2. A jogger covers 20 m in 5 seconds, with an acceleration of 2 m/s^2 . What was her initial velocity?

d	t	v_i	v_f	a

3. What is the final velocity of a horse that starts at 4 m/s and accelerates at 1 m/s^2 for 3 seconds?

d	t	v_i	v_f	a

4. A sprinter, starting from rest, accelerates at 2 m/s^2 for 3 seconds. How far did he go?

d	t	v_i	v_f	a

5. How long would it take a car to go from 10 m/s to 30 m/s, if it accelerated at 3 m/s^2 ?

d	t	v_i	v_f	a

6. What is the initial velocity of a car that accelerates at 3 m/s^2 for 4 seconds and reaches a velocity of 20 m/s?

d	t	v_i	v_f	a

7. How far would a car go if it started at 12 m/s and gained speed at 4 m/s^2 for 7 seconds?