

## **Physics 11 Unit 1 – Worksheet #3 – $V = d/t$ and Acceleration**

Name: \_\_\_\_\_

1. A sprinter covers 100 m in 11.2 seconds.

a) Find the average velocity of the sprinter in m/s

b) Convert this speed to km/hr showing all the steps

c) What is the shortcut for converting km/hr to m/s?

2. A car travels at 85 km/hr for 35 mins. How far does it travel?

3. A plane travels 580 km in 2 hours 30 mins. How fast is it going? (in km/hr)

4. A drag car accelerates from 0 to 29 m/s in 4 seconds. What was the acceleration of the car? Find acceleration in  $\text{m/s}^2$

5. A mini van accelerates from 20 km/hr to 110 km/hr in 8 seconds. What was the acceleration of the mini van? Find acceleration in  $\text{m/s}^2$

6. A semi truck accelerates at  $1.4 \text{ m/s}^2$ . If the truck accelerates for 7.9 seconds from rest, what is the trucks final speed?

7. A dropped ball accelerates at  $9.8 \text{ m/s}^2$ . Starting from rest, how long does it take the ball to reach a speed of 25 m/s?

8. A sports car accelerates from 0 to 60 mph in 5.6 seconds. What is the acceleration of the car in  $\text{m/s}^2$  ?