**1.5 Velocity and Other Rates of Change**

A car is driven along a highway for 3 hours and travels 240 km. What is the average velocity of the car?

Average velocity =

“Instantaneous” Velocity –

The distance, *s*, fallen by a freely falling body is equal to , where *s* is measured in metres and time, *t*, is measured in seconds. With this in mind, find the velocity of a bungee jumper 3.0 s after jumping off of a bridge.

**Instantaneous Velocity**

The displacement, in metres, of a particle moving in a straight line is given by , where *t* is measured in seconds. Find the velocity of the particle after 3 seconds.

**Other Rates of Change –**

**Instantaneous Rate of Change of *y* with respect to *x* –**

A spherical balloon is being inflated. Find the rate of change of the volume with respect to the radius when the radius is 10 cm.