Physics 11

**Section 2.6: The “Big Three”**

**Kinematics Equations**

Whenever an object moves with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, there are a number of quantities we might be interested in:

There are three VERY POWERFUL equations that relate these variables to each other. They are…

Example 1: A police car traveling at 80 km/h east speeds up to 100 km/h east in 1.7 s. What is its acceleration?

Example 2: A sprinter, 20 m before the finish line, finds a little extra energy in her legs and accelerates at 0.9 m/s2 for the rest of the race. She crosses the finish line going 9.3 m/s. What was her velocity when she started accelerating?