Physics 11

**Unit 6 – Momentum and Impulse**

**Section 6.1: Momentum**

Every moving object has momentum, which is a measure of

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Momentum depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

What are the units of momentum?

**Example:** A 10,000 kg train is traveling at 5 m/s east.

1. What’s its momentum?
2. How fast would a 730 kg smart car need to go in order to have the same momentum?

When an object experiences a net force, its momentum changes. It’s often useful to calculate the

change in momentum (a.k.a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_)

**Example:** A 30 g bouncy ball strikes a wall at 32 m/s east and bounces back at 20 m/s west. Calculate .