Physics 11

**Section 4.2: Newton’s Second Law**

Newton’s **first** law told us that if no net force acts on an object, its acceleration is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

So, it’s fair to assume that if there *is* a net force (a.k.a. unbalanced force, resultant force), then the acceleration will be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Newton’s **second** law tells us how to calculate that acceleration:

**Newton’s Second Law**

Take a look at the units on both sides…

**Example:** A 650 kg car accelerates at 4 m/s2 south. What is the net force acting on it?

**Example:** Determine the magnitude and direction of the net force on the object below.

