Unit 4 Review Problems I

**Draw to scale:**

1. If a car is traveling 13 m/s at 25 degrees, ran into another car traveling 14.5 m/s at 95 degrees, what is the resultant?
2. If one person was pulling on a rope with a force of 1500 N at 90 degrees and another person was pulling on the rope with a force of 3200 N at 70 degrees, what is the resultant?

**Use the Law of Cosine and Sine:**

1. If a person was running 10 mph at 132 degrees and the wind was traveling 4 mph at 75 degrees, what would the resultant be?
2. If a car was traveling 85.98 mph at 192 degrees and the wind was traveling 65.65 mph at 60 degrees, what is the resultant?

**Use Pythagorean and Tangent:**

1. If the tension on the string that was tied to a kite applied a force of 212.5 N at 0 degrees and the wind applied a force of 110.5 N at 90 degrees, what is the resultant?

**Momentum and acceleration:**

1. If a force of 70 N created an acceleration of 7.8 m/s2 what is the object’s mass?
2. If something has a mass of 120 Kg and a velocity of 2.3 m/s, what is the momentum?