**Physics 11 - Trigonometry Review and Vector Addition Worksheet**

1. Solve the following triangles using SOH – CAH - TOA and Pythagoras

  

2. Convert the following vectors to x and y components

a) 25 [35o N of E]

b) 373 [12o E of N]

c) 126 [22o N of W]

d) 337 [37o E of S]

e) 1.57 x 10-4 [22o W of S]

1. Convert the following x and y components to vectors

a) x: 3.4 y: 2.7

b) x: 5.6 y: -7.1

c) x: -211 y: -44.0

4. Add the following vectors using the trig method OR the components method

a) 256 [25o N of E] + 313[5o S of W]

b) 1.56 x 104 [35o W of N] + 8.82 x 103 [72o W of S] + 3.33 x 104 [27o S of W]

5. A sailboat is heading 35o East of North at 7.2 knots. The ocean current is 25o South of East at 1.2 knots. What speed and direction is the sailboat tracking? (Find the answer using the add components method)

6. A B747 is crossing the Pacific at 420 knots on a heading of 44o S of W. Air Traffic Control radar is tracking the plane at 470 knots [49o S of W]. What is the wind speed and direction?