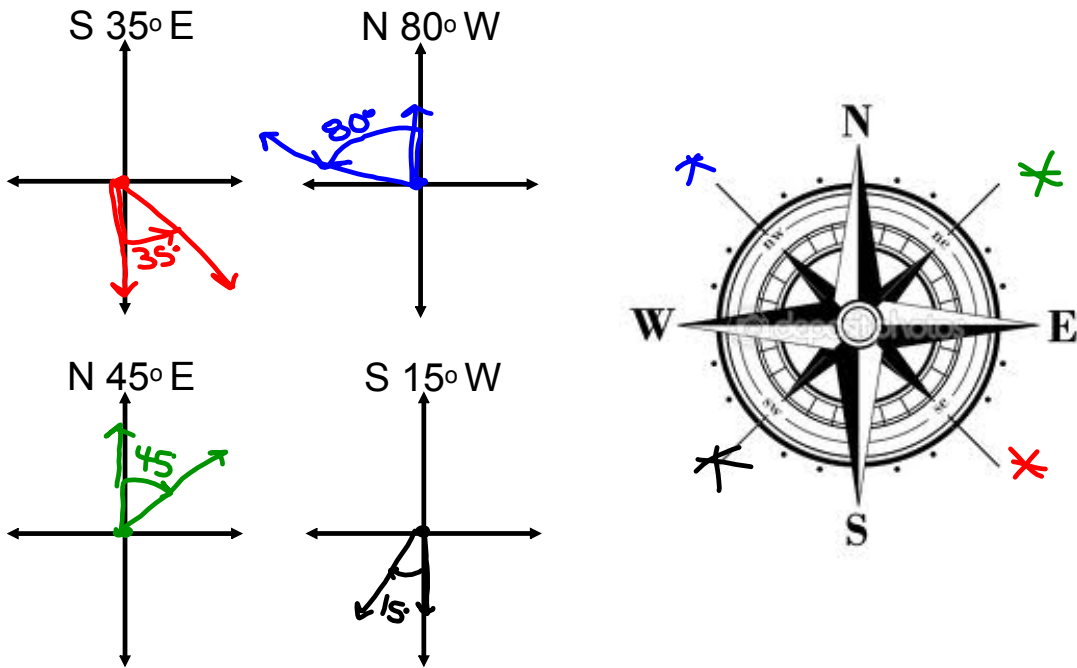
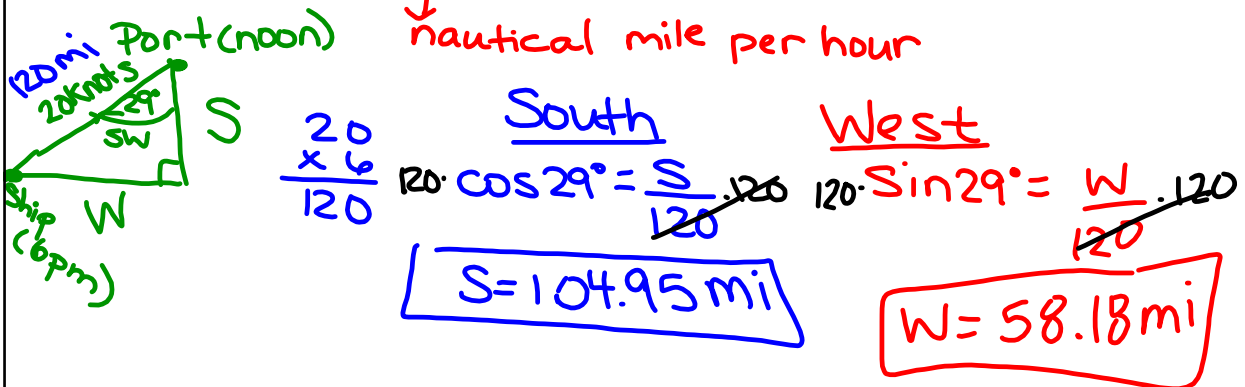


## Trig and Navigational Bearings

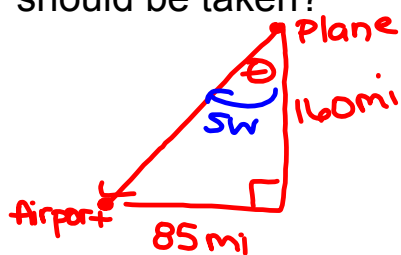


## Right Triangle Applications with Bearings

Example 1: A ship leaves port at noon and has a bearing of S 29° W. If the ship sails at 20 knots, how many nautical miles south and how many nautical miles west will the ship have travelled by 6:00pm?



Example 2: A plane is 160 miles north and 85 miles east of an airport. If a pilot wants to fly directly to the airport, what bearings should be taken?



$$\tan \theta = \frac{85}{160}$$

$$\theta = \tan^{-1} \left( \frac{85}{160} \right)$$

$$\theta = S 27.98^\circ W$$