

## 1.7: Review

Keep in mind the summary chart from last class:

### **Example 1 Use the Sine Law**

From an airplane, a surveyor observes two points, A and B, with A being closer to the plane and 9750 m away in a direct line. If the angle of depression to point A is  $45^\circ$  and the angle of depression to point B is  $32^\circ$ , how far is it across the lake?

\*Remember the properties of parallel lines.

### **Example 2 Use the Cosine Law**

A surveyor needs to estimate the length of a swampy area. She starts at one end of the swamp and walks in a straight line, 450 paces, and turns  $60^\circ$  towards the other end of the swamp. She then walks in another straight line, 380 paces, before arriving at the other end of the swamp. One pace is about 75 cm. Estimate the length of the swamp in metres.

### **Example 3 Use Primary Trigonometric Ratios**

Josh is building a garden shed that is 4 m wide. The two sides of the roof must meet at an  $80^\circ$  angle and be equal in length. How long must each rafter be if he allows for a 0.5 m overhang?