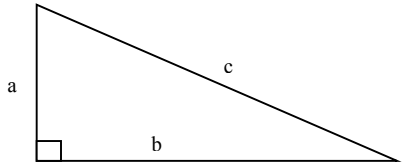
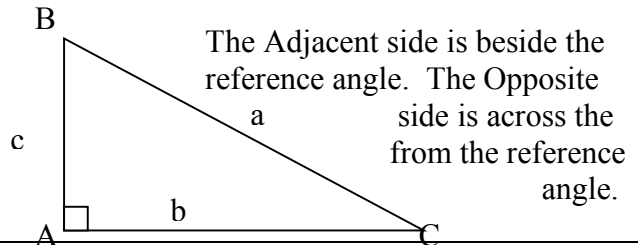
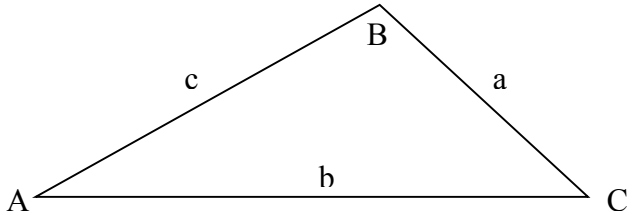
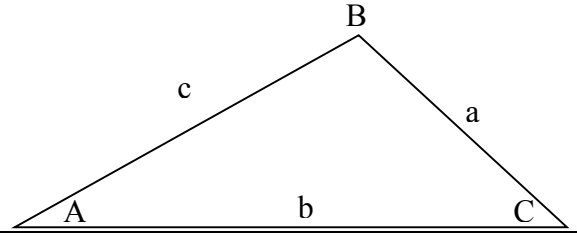
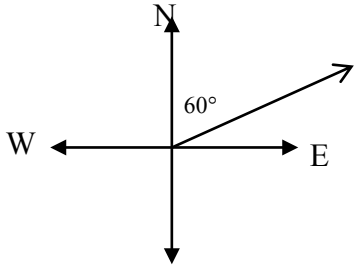
MAP 4CI Trigonometry Reference Sheet

Formula	Picture	When to use	
Pythagorean $a^2 + b^2 = c^2$		Right angle triangle - given 2 sides	- asked to find third side
Trig Ratios SOHCAHTOA $sin\theta = \frac{O}{H}, cos\theta = \frac{A}{H}, tan\theta = \frac{O}{A}$ In standard position, $r = \sqrt{x^2 + y^2}$ $sin\theta = \frac{y}{r}, cos\theta = \frac{x}{r}, tan\theta = \frac{y}{x}$	 The Adjacent side is beside the reference angle. The Opposite side is across the from the reference angle.	Right angle triangle - given two sides - given one side and an angle	- asked to find angle - asked to find side
Sine Law $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$		No right angle - given two angles and one opposite side - given two sides and one opposite angle	- asked to find other opposite side - asked to find other opposite angle
Cosine Law $a^2 = b^2 + c^2 - 2bc\cos A$ or $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$		No right angle - given two sides & a contained angle - given three sides	- calculate the third side - can calculate angle

Angle of elevation is always measured UP from the HORIZONTAL. Angle of depression always measured DOWN from the HORIZONTAL.



Bearing 060° is the same as N60°E
Bearing is measured clockwise from North.
So a bearing of 200° is the same as S20°W.

You will be given a copy of this reference sheet for your quiz and your test.

QUIZ DATE: _____

TEST DATE: _____