MPM 2DI EXAM REVIEW – Chapters 7 and 8: Trigonometry

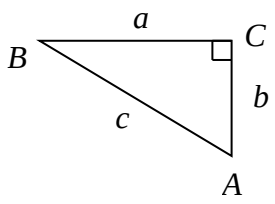
(Revised Fall 2016)

Formula Sheet (*for Review Purposes only*)

Pythagorean Theorem:

For any right triangle *ABC*,

$c^2 = a^2 + b^2$

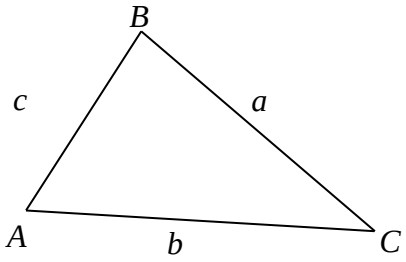


Primary Trig Ratios:

For any **right** triangle *ABC*, at angle *A*,

SOH	**CAH**	**TOA**
$\sin A = \frac{opposite}{hypotenuse}$	$\cos A = \frac{adjacent}{hypotenuse}$	$\tan A = \frac{opposite}{adjacent}$

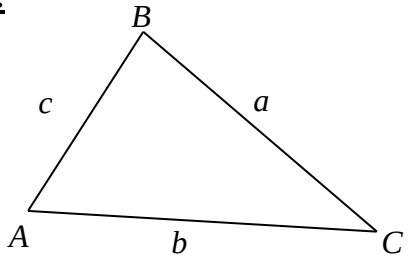
The Sine Law:



For **any** triangle *ABC*,

$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$ **AND** $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$

The Cosine Law:



For **any** triangle *ABC*,

$a^2 = b^2 + c^2 - 2bc \cos A$ **AND** $b^2 = a^2 + c^2 - 2ac \cos B$ **AND** $c^2 = a^2 + b^2 - 2ab \cos C$

$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$ **AND** $\cos B = \frac{a^2 + c^2 - b^2}{2ac}$ **AND** $\cos C = \frac{a^2 + b^2 - c^2}{2ab}$