

Advanced Math

6-2

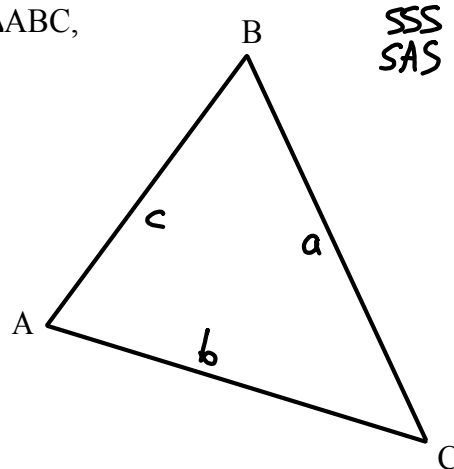
Law of Cosines

Law of Cosines - Given the general triangle $\triangle ABC$,

$$c^2 = a^2 + b^2 - 2ab \cos C$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$



Assignment:

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2-14 even,

21-35 all, 37,

44-48 even.

Solve the triangle.

7) $a = 75.4$

$b = 52$

$c = 52$

$$75.4^2 = 52^2 + 52^2 - 2(52)(52) \cos A$$

$$5685.16 = 2704 + 2704 - 2(2704) \cos A$$

$$5685.16 = 5408 - 5408 \cos A$$

$$277.16 = -5408 \cos A$$

$$-.05125 = \cos A$$

$$\cos^{-1}(-.05125) = A$$

$$92.938^\circ = A$$

