

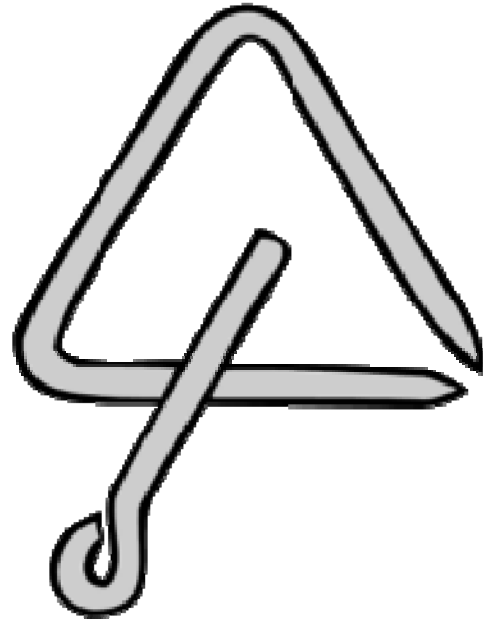
Name \_\_\_\_\_

Date \_\_\_\_\_

### Law of Cosines - Step-by-Step Lesson

In  $\triangle ABC$ , side  $b = 6$ , side  $c = 5$  and  $m\angle A = 78^\circ$ .

Find side 'a' to the nearest integer.



#### Explanation:

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

$$a^2 = 6^2 + 5^2 - 2(6)(5)\cos 78^\circ$$

$$a^2 = 36 + 25 - 60(0.20791169081)$$

$$a^2 = 61 - 12.4747014486$$

$$a^2 = 48.5253$$

$$a = 6.9$$

$$a = 7$$

So, the answer is 7

