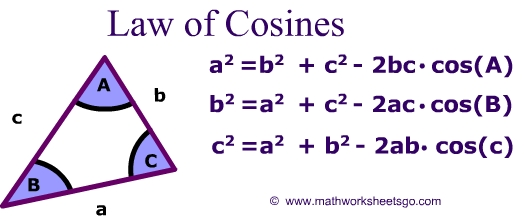
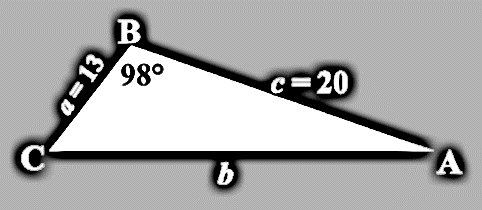
**Unit 6 #5 Law of Cosines**

\*Usually used when you have \_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_.

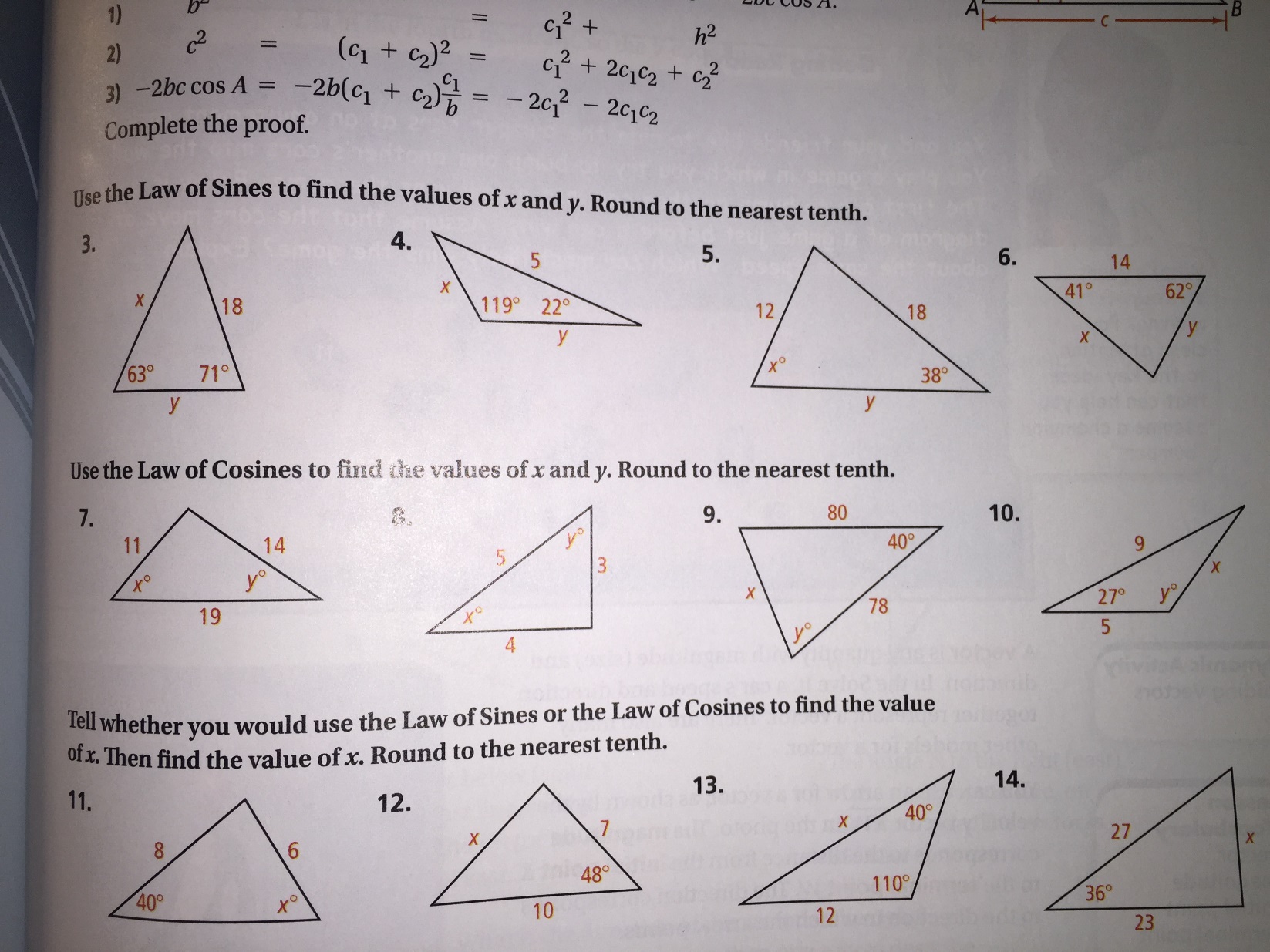
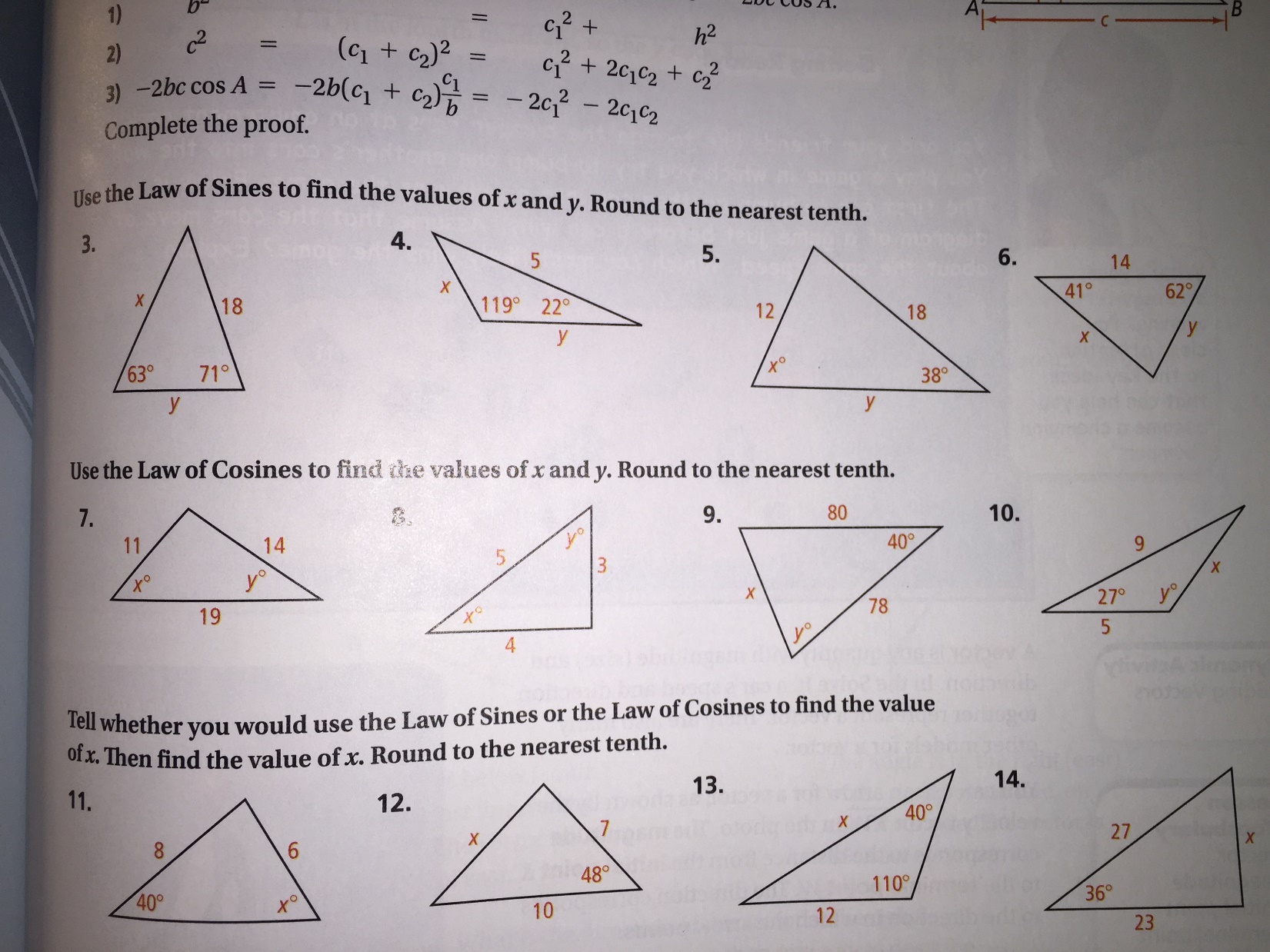
USE LAW OF COSINES WHEN…

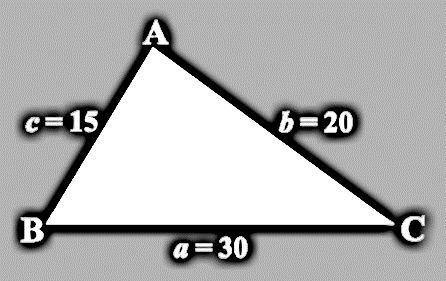
1. You know the length of all three \_\_\_\_\_\_\_\_\_\_ of a triangle and are trying to find an \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. You know two \_\_\_\_\_\_\_\_\_\_\_ and an included \_\_\_\_\_\_\_\_\_\_\_\_ and are trying to find the side \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the angle.

a2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

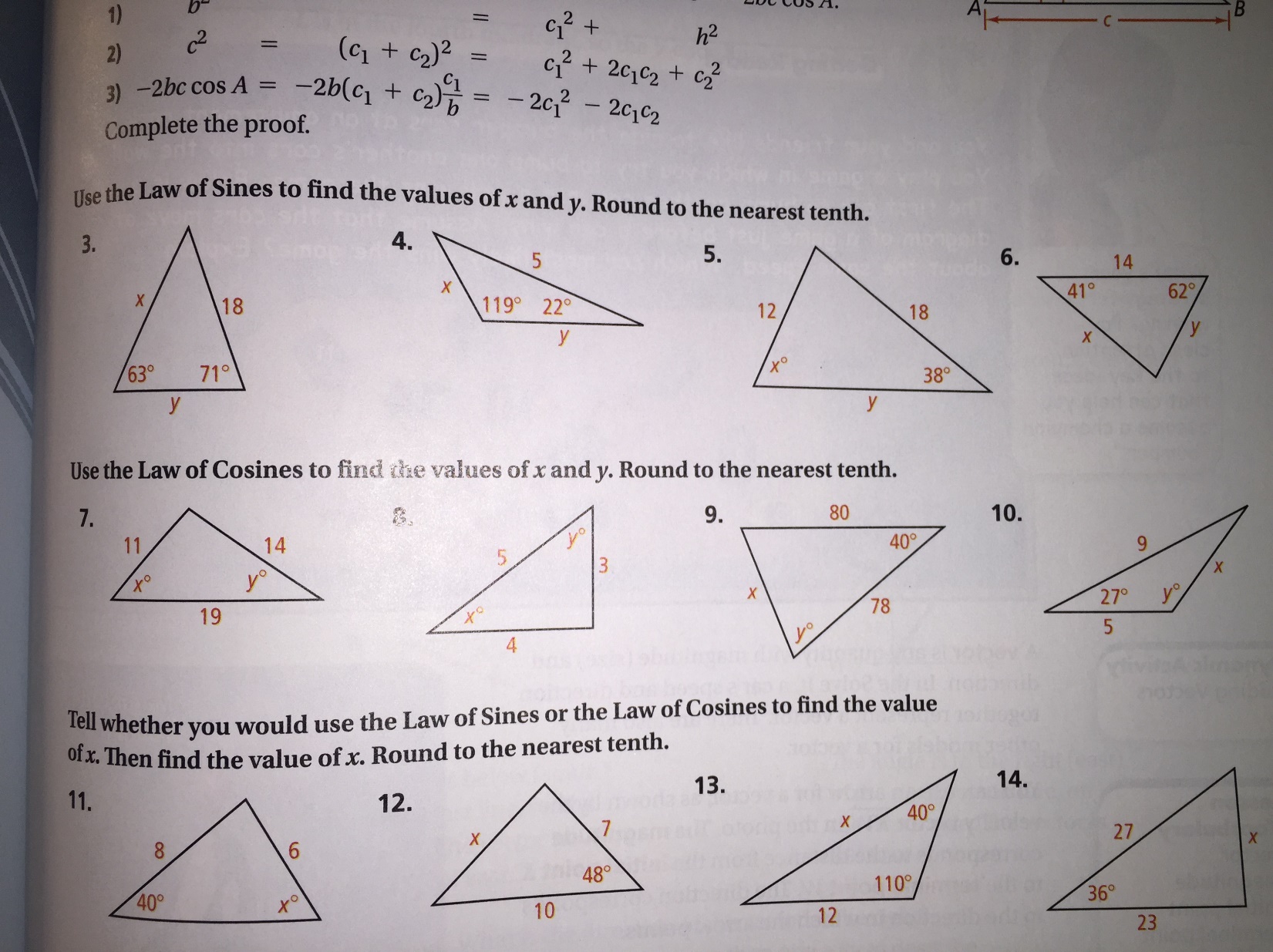
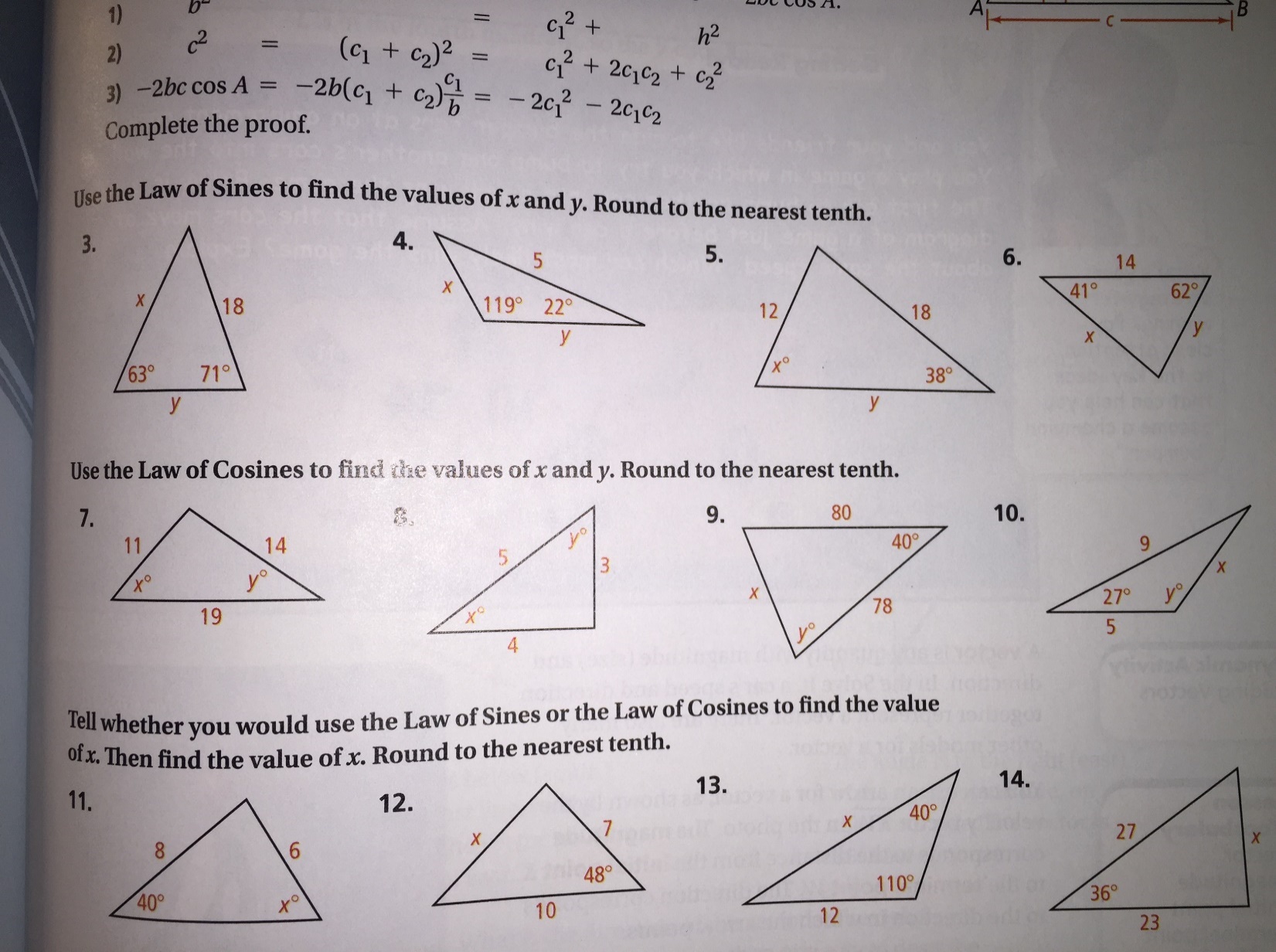
Example 1: Given SAS: Find the length of , given that angle B = 98o, side a= 13 and side c= 20.

**Practice Problems:** Find the value of x.

1. 2.

Example 2: Given SSS: Find m∠B, given that side a = 30, side b = 20, and side c = 15.

**Practice Problems:** Find the values of x and y. *Hint: You will have to use the Law of Cosines twice!*

3. 4.

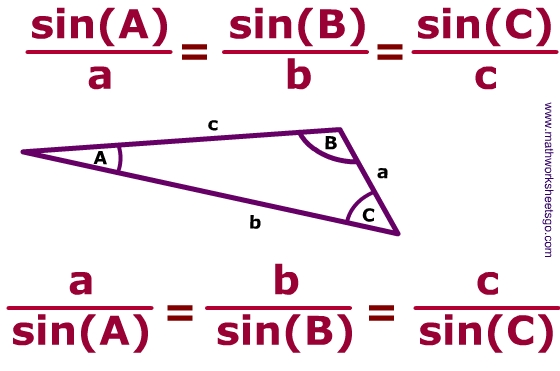
**Unit 6 #6 Law of Sines**

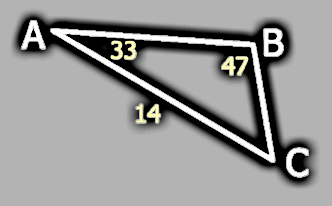
\*Usually used when you have \_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_

USE LAW OF SINES WHEN…

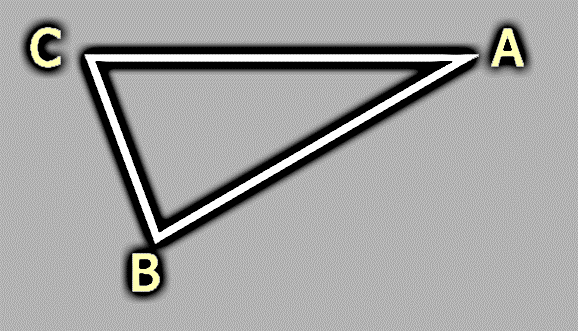
1. You know two \_\_\_\_\_\_\_\_\_\_ and an \_\_\_\_\_\_\_\_\_\_\_\_ side and are trying to find the angle \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the side.
2. You know two \_\_\_\_\_\_\_\_\_\_\_\_ and a non-included \_\_\_\_\_\_\_\_\_ and are trying to find a missing \_\_\_\_\_\_\_\_\_\_\_\_\_.

= =



Example 1: Find the missing angle. In the triangle below, m∠A = 33o, m∠B = 47o and b = 14. Find the length of .

**Practice Problem:** Find all missing angles and sides in the triangle below: m∠A = 28o, a = 12, and b = 24.



Example 2: A civil engineer wants to determine the distances from points A and B to an inaccessible point C. From direct measurement, the engineer knows that AB = 25m, m∠A = 110o, and m∠B = 20o. Find AC and BC.