1. Find the value of x and the measure of $\angle A$ and $\angle BCD$.

B
/70°/
A /3x
x^2
C   D
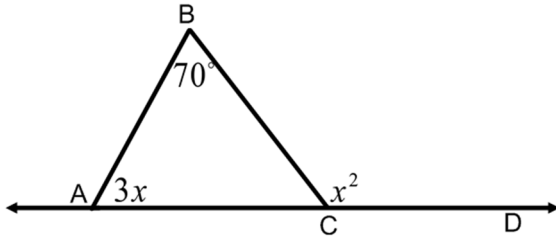
2. Find the value of x. Leave in simplest radical form. Assume that $\overline{CD}\|\overline{BE}$.

C
$\sqrt{3}$
B
7
A
$\sqrt{5}$ E   x   D
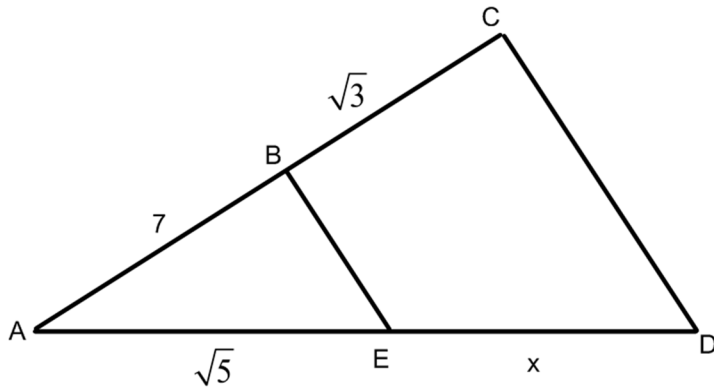
3. $\overline{AD}$ is 24 inches long. B is between A and D, and C is between B and D.   AB = CD and BC is equal to the square of AB. Draw and label a picture. Find the length of each segment.
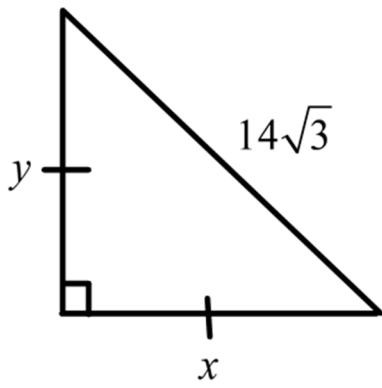
4. Find the geometric mean of 12 and 30.

5. Given lengths of 10, $5\sqrt{6}$ and 7, determine whether the lengths can form a triangle. If they can, determine whether the triangle is right, obtuse or acute.

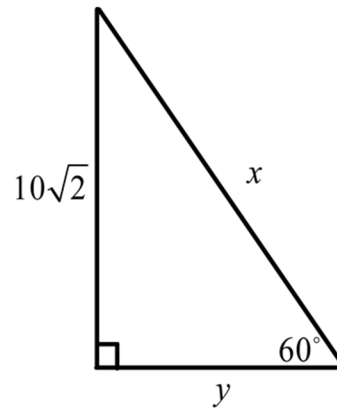6. Find the value of x and the angle measures of the triangle below.
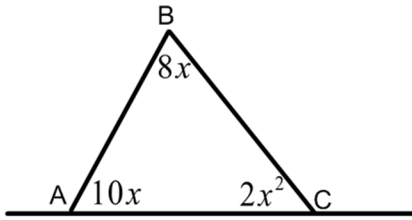
Find the value of x and y in each of the figures below.

7.

$14\sqrt{3}$

y

x

8.

$10\sqrt{2}$

x

$60°$

y

9. Given that the measure of $\angle ABC = 2x$ and the measure of $\angle CBD$ is the square of angle ABC, find the measure of each of the angles if the measure of $\angle ABD = 30^o$.