Geometry Chapter 9 BI Online Review

Things to review

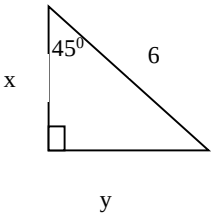
- 60-30-90 and 45-45-90 triangles
    - also know how to use these to find the perimeter
- know the difference between angle of elevation and angle of depression
- geometric means & how to apply them to a right triangle in which you drop an altitude
- sin, cos, tan
- law of sines
- law of cosines
- know how to do problems like: PM 47

Sample Problems

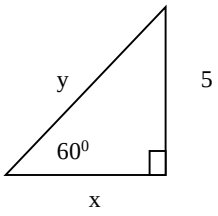
1. The angle of depression from the top of a tower to point A is 25^0. The distance from A to the base of the tower (point B) is 100 m. Find the height of the tower.

2. Solve each for x and y.

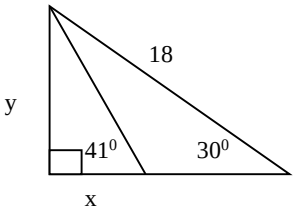
a)



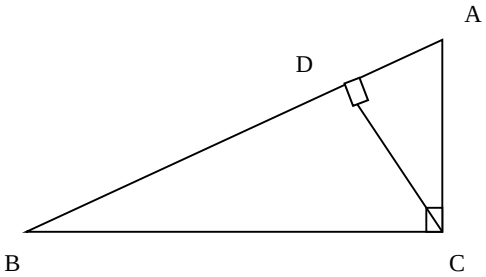
b)



3. Solve for x:



4. Use the triangle to solve each:

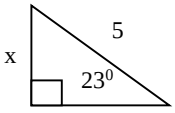


a) Write a ratio if CD is the geometric mean.

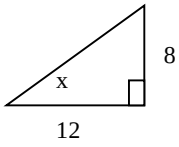
b) Write a ratio if BC is the geometric mean.

c) Write a ratio if AC is the geometric mean.

5. Solve for x: a)



b)



6. a) Solve for a if C = 103^0, B = 28^0 and b = 26.
   b) Solve for b if a = 12, c = 16 and B = 38^o.

7. Given the lengths of a triangle 5, 8, 10. Is it acute, obtuse or right?

Answers:

1. 46.63 m
2. a) $x = y = 3\sqrt{2}$ b) $x = \frac{5\sqrt{3}}{3}$ $y = \frac{10\sqrt{3}}{3}$
3. y = 9, x = 10.35
4. a) $\frac{AD}{CD} = \frac{CD}{DB}$ b) $\frac{BD}{BC} = \frac{BC}{BA}$ c) $\frac{AD}{AC} = \frac{AC}{AB}$
5. a) x = 1.95 b) $x = 33.69^0$
6. a) 41.8 b) 9.87
7. obtuse