

## Geometry Chapter 8 Review

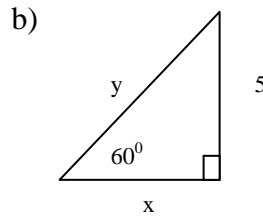
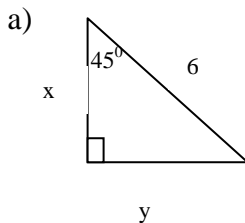
Things to review

- 60-30-90 and 45-45-90 triangles
  - o 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:
  - p.288 WE 22-39
  - p. 303 21-26, 28, 29
  - p.309 1-18, 21-24
  - p.314 1-12

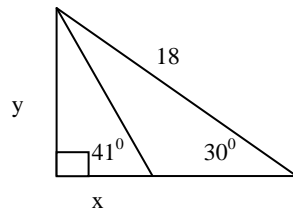
### Sample Problems

1. The angle of depression from the top of a tower to point A is  $25^\circ$ . 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.

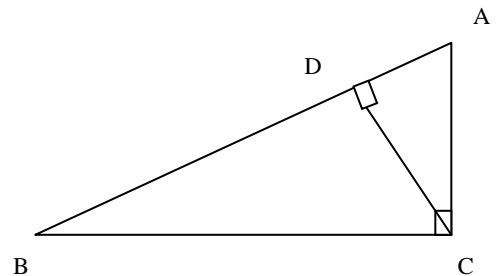


3. Solve for x:

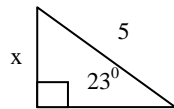


4. Use the triangle to solve each:

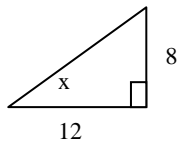
- a) Write a ratio if CD is the geometric mean.
- b) Write a ratio if BC is the geometric mean.
- c) Write a ratio if AC is the geometric mean.



5. Solve for x: a)



b)



6. a) Solve for  $a$  if  $C = 103^\circ$ ,  $B = 28^\circ$  and  $b = 26$ .

b) Solve for  $b$  if  $a = 12$ ,  $c = 16$  and  $B = 38^\circ$ .

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)  $x = 33.69^\circ$

6. a) 41.8    b) 9.87