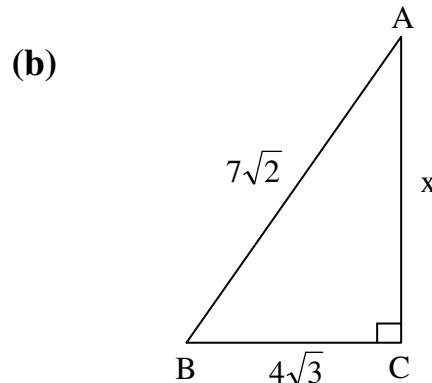# Geo 9   Ch 8 Right Triangles   Geometry Review Worksheet
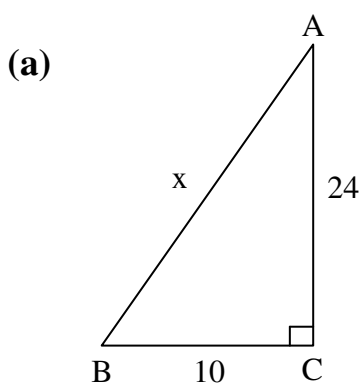
(1) Solve for x given each of the right triangles below, with sides as indicated.

(a)

A

x

24

B   10   C

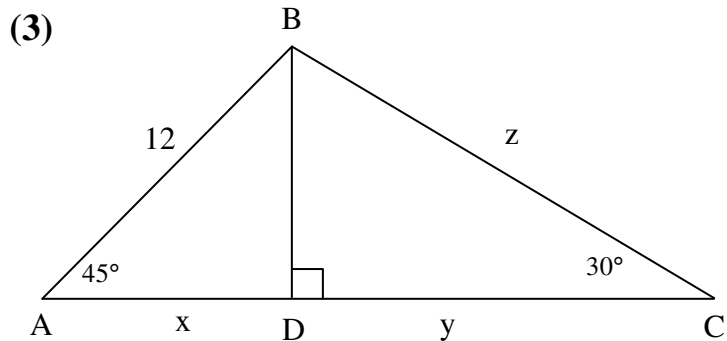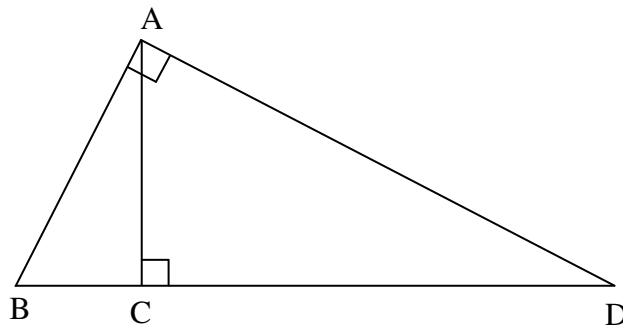**(b)**

A

$7\sqrt{2}$

x

B $4\sqrt{3}$ C

---

(2) Given the figure below, $\overline{AC} \perp \overline{BD}$, $\overline{AB} \perp \overline{AD}$, find the indicated lengths given sides as indicated.

A

(a) BC = 2 , CD = 8   **Find:** AB_____ AC_____AD_____
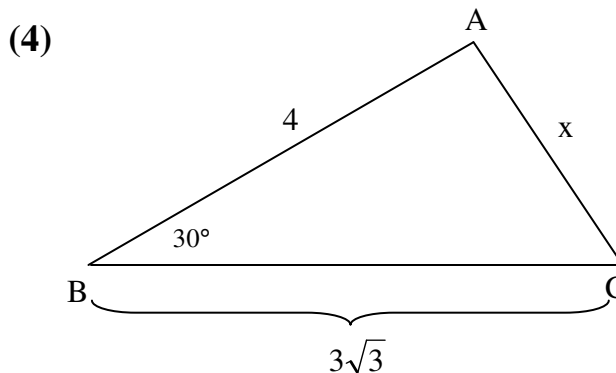
(b) AD = 20, AC = 12 **Find:** AB_____BC_____CD_____

(c) AC = 8 , CD = 16 **Find:** AB_____BC_____AD_____

(d) AB = 6 , CD = 5   **Find:** BC_____AC_____AD_____

B   C   D

---

(3)

B

12

z

45°

30°

A   x   D   y   C

Given: $\overline{BD} \perp \overline{AC}$, sides and angles as marked.

Find: x_____ , y_____ , z_____

(4)

A

4

x

30°

B   C

$3\sqrt{3}$
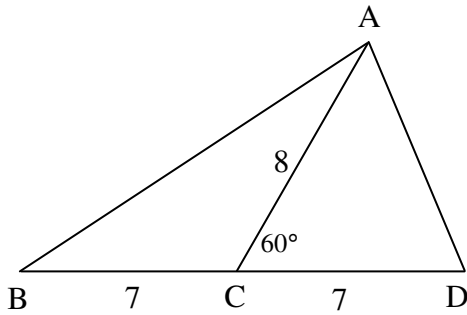
Given: sides and angles as marked.

Find: x_____. Is ∠A obtuse, right, or acute?

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(5) The perimeter of a rhombus is 20. The length of the longer diagonal is 8. How long is the shorter diagonal?

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(6) The altitude of an equilateral triangle is 12. Find the perimeter of the triangle.

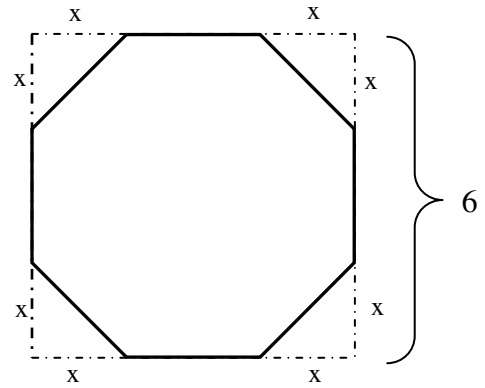# Geo 9   Ch 8 Right Triangles   Geometry Review Worksheet
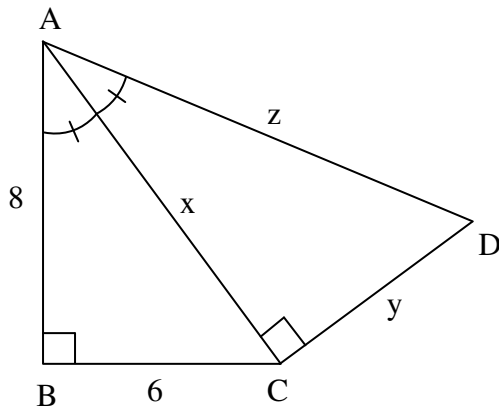
(7)

Given: sides and angles as marked

Find: AB_____ , AD_____

(8)

The corners are cut off a 6 inch square to form
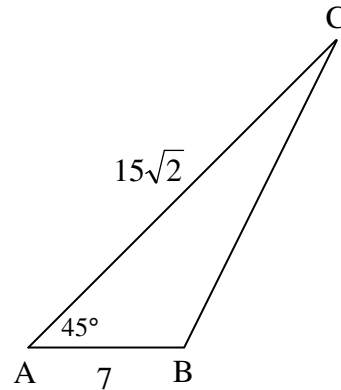
a regular octagon as shown. **Find:** x_____

(9)

Given: sides and angles as marked
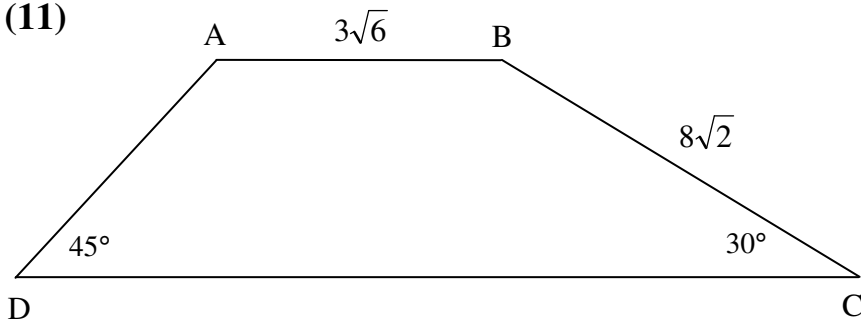
Find: x_____ , y_____ , z_____

(10)

Given: sides and angles as marked

Find: BC_____

(11)

Given: $\overline{AB} \parallel \overline{CD}$, sides and angles as marked

Find: AD_____ and CD_____.

Geo 9   Ch 8   Right Triangles   Geometry Review Worksheet

(1)   **(a)** $x = 26$ **(b)** $x = 5\sqrt{2}$

(2)   **(a)** $AB = 2\sqrt{5}$, $AC = 4$, $AD = 4\sqrt{5}$

       (b) $AB = 15$, $BC = 9$, $CD = 16$

       (c) $AB = 4\sqrt{5}$, $BC = 4$, $AD = 8\sqrt{5}$

       (d) $BC = 4$, $AC = 2\sqrt{5}$, $AD = 3\sqrt{5}$

(3) $x = 6\sqrt{2}$, $y = 6\sqrt{6}$, $z = 12\sqrt{2}$

(4) $x = \sqrt{7}$, $\angle A$ is obtuse

(5) 6

(6) $24\sqrt{3}$

(7) $AB = 13$, $AD = \sqrt{57}$

(8) $6 - 3\sqrt{2}$

(9) $x = 10$, $y = \frac{15}{2}$, $z = \frac{25}{2}$

(10) $BC = 17$

(11) $AD = 8$, $CD = 4\sqrt{2} + 7\sqrt{6}$

(12) $x = 24$