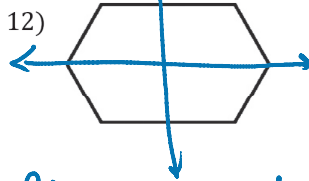
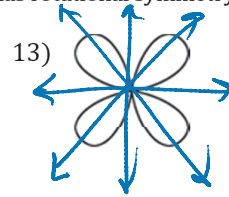


State if the figure in #12-13 has line symmetry or rotational symmetry. If it has rotational symmetry, give the angle and order.



- line symmetry
- rotational symmetry
order: 2
degree: 180°



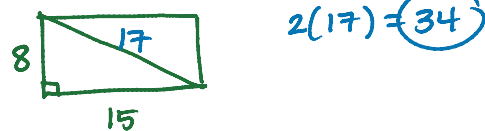
- line symmetry
- rotational symmetry
order: 4
degree: 90°

Sections 5.7-5.8, 8.2-8.4

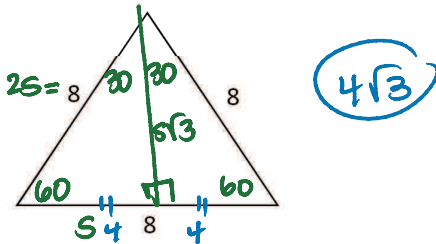
1) Determine if the side lengths of 6, 9, and 14 form a triangle. If so, classify the triangle as obtuse, right, or acute.

1st Δ ? $6+9 > 14$ $14^2 ? 117$
 $15 > 14 \checkmark$ $>$
 2nd Type $c^2 ? a^2 + b^2$ Obtuse Δ
 $14^2 ? 6^2 + 9^2$

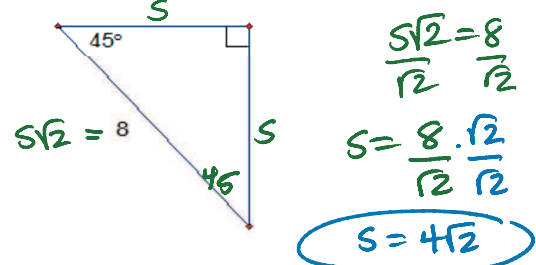
2) What is the sum of the lengths of the diagonals of an 8 by 15 rectangle?



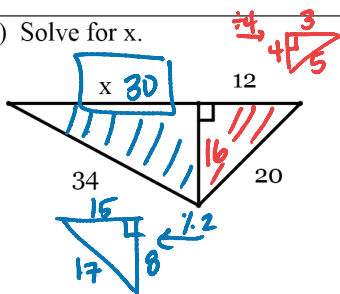
3) Find the altitude of the triangle below.



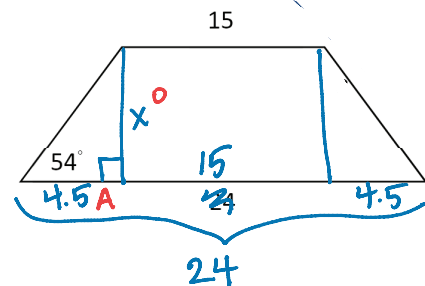
4) Find the missing side lengths of the right triangle.



5) Solve for x.



6) Find the height of the isosceles trapezoid.



$\tan 54 = \frac{x}{4.5}$
 $x = 4.5 \tan 54$
 $x \approx 6.19$

7) Solve for the missing sides.

a)
$$\frac{s\sqrt{3}}{\sqrt{3}} = \frac{12}{\sqrt{3}}$$

$$s = \frac{12 \cdot \sqrt{3}}{\sqrt{3} \cdot \sqrt{3}}$$

$$s = 4\sqrt{3}$$

b)
$$s = 2\sqrt{6}$$

$$2 \cdot 2\sqrt{6} = 4\sqrt{6}$$

c)
$$10\sqrt{3} = 2s$$

$$s = 5\sqrt{3}$$

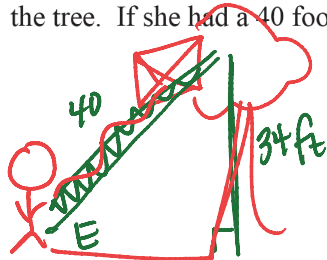
d)
$$s = 3\sqrt{10}$$

e)
$$12 = s\sqrt{2}$$

$$s = \frac{12}{\sqrt{2}} = \frac{12 \cdot \sqrt{2}}{\sqrt{2} \cdot \sqrt{2}}$$

$$s = \frac{12 \cdot \sqrt{2}}{2}$$

8) A boy was flying a kite and it got stuck in a tree. His mom determined that the kite was 34 feet up in the tree. If she had a 40 foot ladder and angled it toward the tree, what was the angle of elevation?

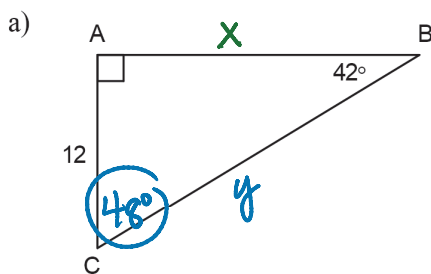


$$\sin E = \frac{34}{40}$$

$$E = \sin^{-1}\left(\frac{34}{40}\right)$$

$$E \approx 58^\circ$$

9) Solve all missing sides and angles of the right triangles below:



$$\tan 42 = \frac{12}{x}$$

$$x \cdot \tan 42 = 12$$

$$x = \frac{12}{\tan 42}$$

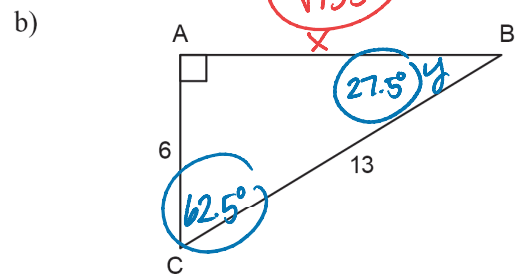
$$x \approx 13.83$$

$$\sin 42 = \frac{12}{y}$$

$$y \cdot \sin 42 = 12$$

$$y = \frac{12}{\sin 42}$$

$$y \approx 17.93$$



$$6^2 + x^2 = 13^2$$

$$x^2 = 133$$

$$x = \pm\sqrt{133}$$

$$\sin y = \frac{6}{13}$$

$$y = \sin^{-1}\left(\frac{6}{13}\right)$$

$$y \approx 27.5^\circ$$

Study! Check your notes, rework problems, check SharePoint, study with a buddy, etc.