

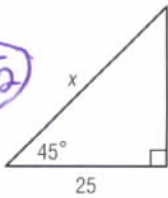
# 8-3 Skills Practice

## Special Right Triangles

Find  $x$ .

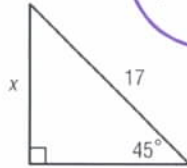
1.

$x = 25\sqrt{2}$



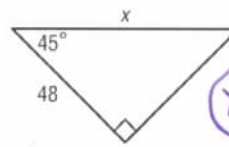
2.

$x = \frac{17\sqrt{2}}{2}$



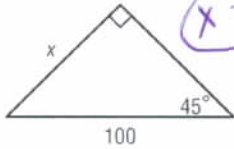
3.

$x = 48\sqrt{2}$



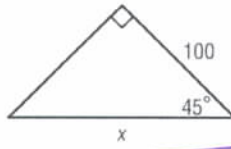
4.

$x = 50\sqrt{2}$



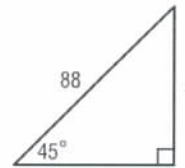
5.

$x = 100\sqrt{2}$



6.

$x = 44\sqrt{2}$

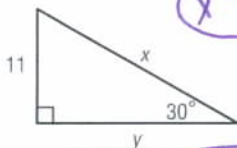


- Determine the length of the leg of  $45^\circ-45^\circ-90^\circ$  triangle with a hypotenuse length of 26.
- Find the length of the hypotenuse of a  $45^\circ-45^\circ-90^\circ$  triangle with a leg length of 50 centimeters.

Find  $x$  and  $y$ .

9.

$x = 22$

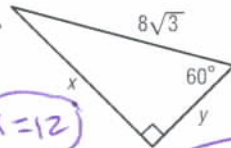


$y = 11\sqrt{3}$

10.

$x = 12$

$y = 4\sqrt{3}$



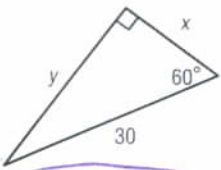
11.

$x = 15$   
 $y = 10\sqrt{3}$



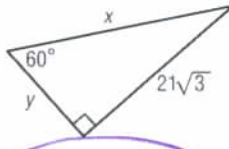
12.

$x = 15$   
 $y = 15\sqrt{3}$



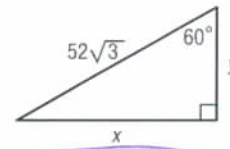
13.

$x = 42$   
 $y = 21$

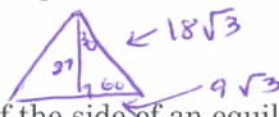


14.

$x = 78$

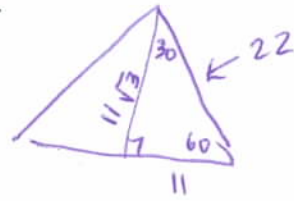


- An equilateral triangle has an altitude length of 27 feet. Determine the length of a side of the triangle.



$\text{each side is } 18\sqrt{3} \text{ feet}$

- Find the length of the side of an equilateral triangle that has an altitude length of  $11\sqrt{3}$  feet.



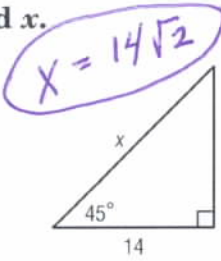
$\text{each side is } 22 \text{ feet}$

# 8-3 Practice

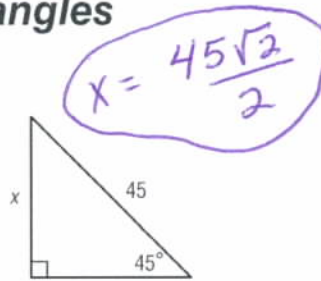
## Special Right Triangles

Find  $x$ .

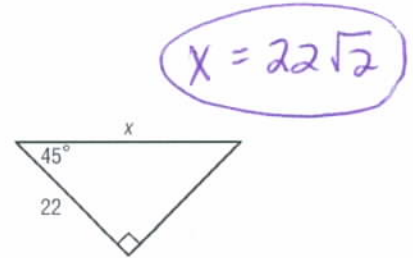
1.



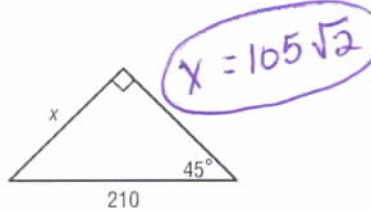
2.



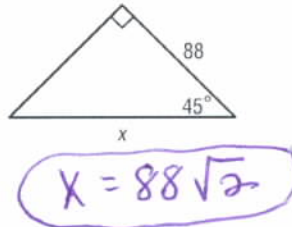
3.



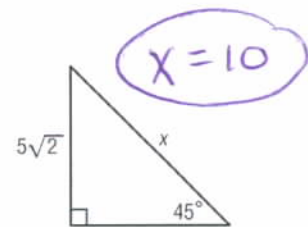
4.



5.

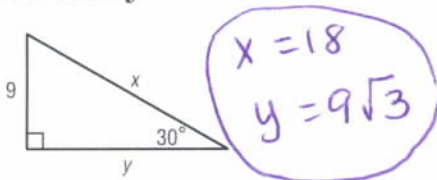


6.

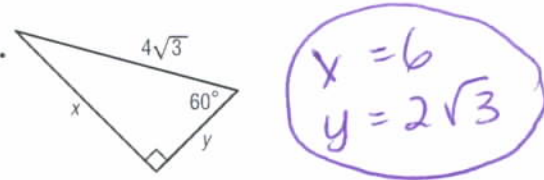


Find  $x$  and  $y$ .

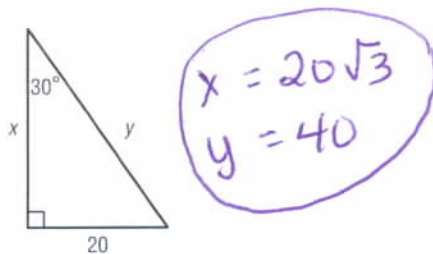
7.



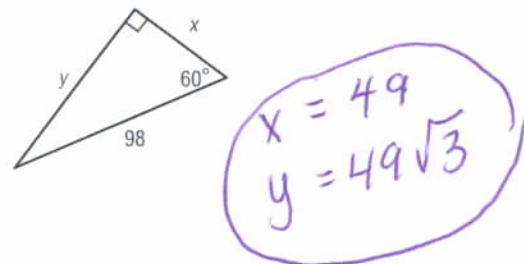
8.



9.



10.



11. Determine the length of the leg of  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle with a hypotenuse length of 38.

Handwritten solution:  $19\sqrt{2}$

12. Find the length of the hypotenuse of a  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle with a leg length of 77 centimeters.

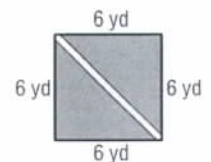
Handwritten solution:  $77\sqrt{2}$  cm

13. An equilateral triangle has an altitude length of 33 feet. Determine the length of a side of the triangle.



Handwritten solution:  $22\sqrt{3}$  feet

14. **BOTANICAL GARDENS** One of the displays at a botanical garden is an herb garden planted in the shape of a square. The square measures 6 yards on each side. Visitors can view the herbs from a diagonal pathway through the garden. How long is the pathway?



Handwritten solution:  $6\sqrt{2}$  yds