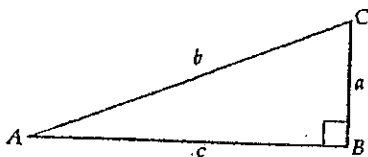


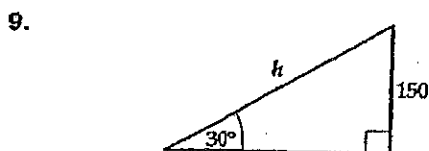
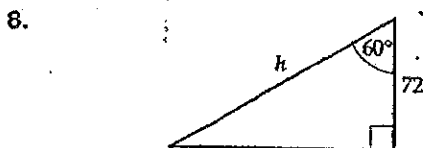
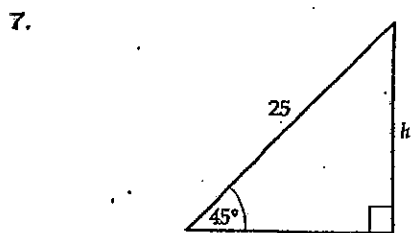
Solving Right Triangles using Trig Ratios, 45-45-90 and 30-60-90 Triangles

In Exercises 1-6, find side c in the figure below by using the given conditions.

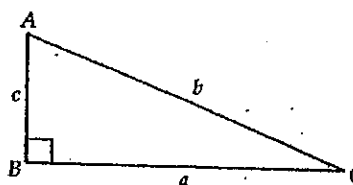


1. $\cos A = \frac{12}{13}$ $b = 39$
2. $\sin C = \frac{3}{4}$ $b = 12$
3. $\tan A = \frac{5}{12}$ $a = 15$
4. $\sec A = 2$ $b = 8$
5. $\cot A = 6$ $a = 1.4$
6. $\csc C = 1.5$ $b = 4.5$

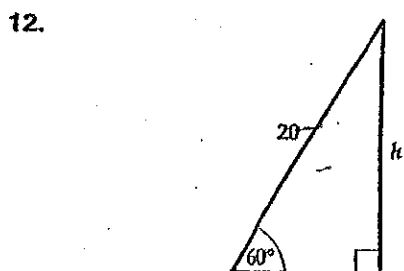
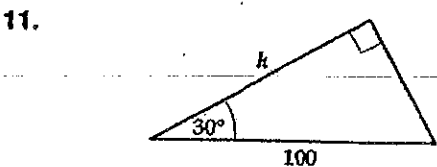
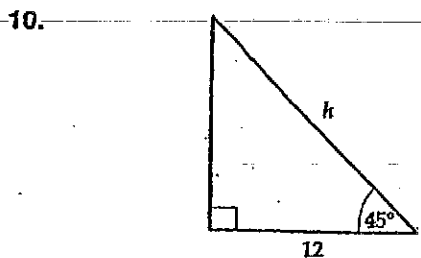
In Exercises 7-12, find the exact value of h without using a calculator.



Use the figure below for Exercises 13-24.



In Exercises 13-16, find the indicated value without using a calculator.



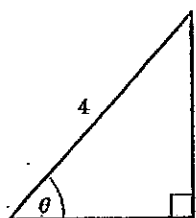
13. $a = 4$ $m\angle A = 60^\circ$ Find c .
14. $c = 5$ $m\angle A = 60^\circ$ Find a .
15. $c = 10$ $m\angle A = 30^\circ$ Find a .
16. $a = 12$ $m\angle A = 30^\circ$ Find c .

In Exercises 17-24, solve the triangle with the given conditions.

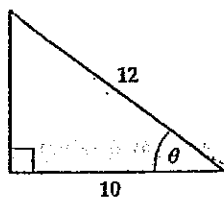
17. $b = 10$ $m\angle C = 50^\circ$
18. $c = 12$ $m\angle C = 37^\circ$
19. $a = 6$ $m\angle A = 14^\circ$
20. $a = 8$ $m\angle A = 40^\circ$
21. $c = 5$ $m\angle A = 65^\circ$
22. $c = 4$ $m\angle C = 28^\circ$
23. $b = 3.5$ $m\angle A = 72^\circ$
24. $a = 4.2$ $m\angle C = 33^\circ$

In Exercises 25–28, find angle θ .

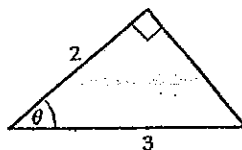
25.



26.

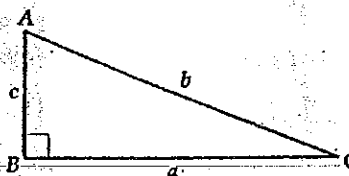
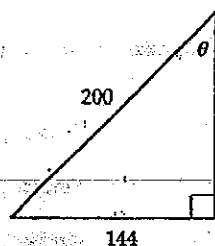


27.



Use the figure below for Exercises 13–24.

28.



In Exercises 29–36, use the figure for Exercises 13–24 to find angles A and C under the given conditions.

29. $a = 4$ and $c = 6$ 30. $b = 14$ and $c = 5$

31. $a = 7$ and $b = 10$ 32. $a = 5$ and $c = 3$

33. $b = 18$ and $c = 12$ 34. $a = 4$ and $b = 9$

35. $a = 2.5$ and $c = 1.4$

36. $b = 3.7$ and $c = 2.2$