

Simplify the following radicals.

1. $\sqrt{75}$

2. $\sqrt{90}$

3. $\sqrt{27}$

4. $\sqrt{150}$

5. $\sqrt{100}$

6. $\sqrt{68}$

7. $\sqrt{108}$

8. $\sqrt{507}$

Multiply the radicals then simplify.

9. $\sqrt{13} \cdot \sqrt{13}$

10. $\sqrt{2} \cdot \sqrt{72}$

11. $\sqrt{10} \cdot \sqrt{7}$

12. $3\sqrt{5} \cdot \sqrt{5}$

Simplify.

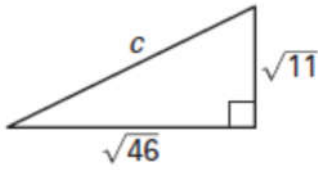
13. $(4\sqrt{7})^2$

14. $(3\sqrt{11})^2$

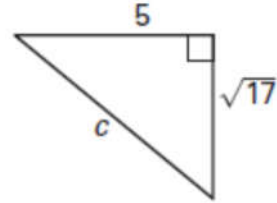
15. $(2\sqrt{5})^2$

Use the Pythagorean Theorem to find the length of the hypotenuse. Write your answer in simplified radical form. ($a^2 + b^2 = c^2$) NO DECIMALS!

16.

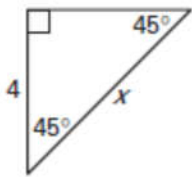


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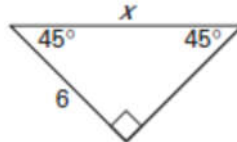


Find the length of x of a leg in the 45° - 45° - 90° triangle. (REMEMBER HYPOTENUSE = leg $\cdot \sqrt{2}$)

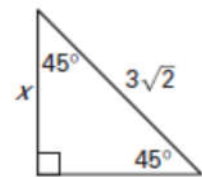
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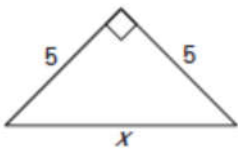
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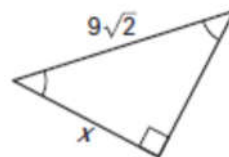
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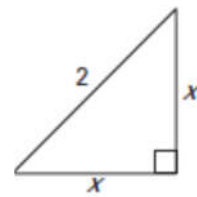
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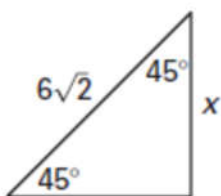
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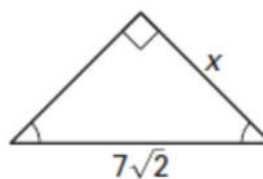
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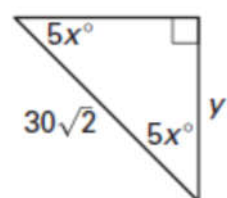
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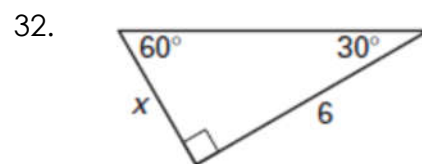
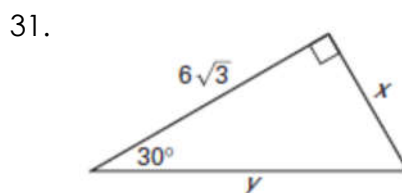
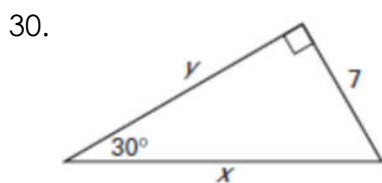
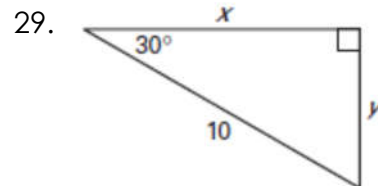
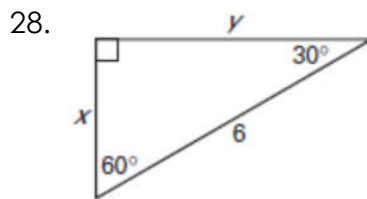
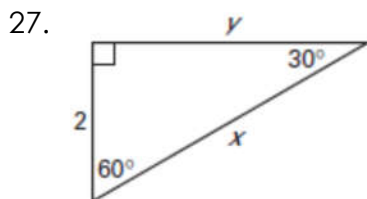
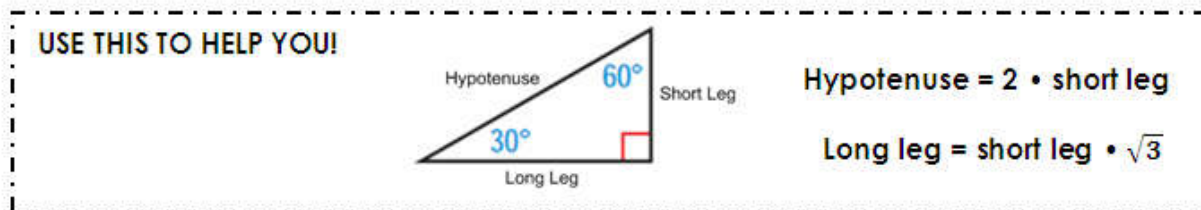
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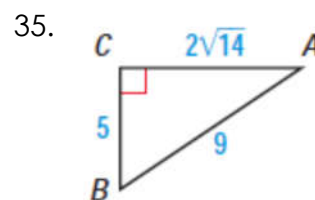
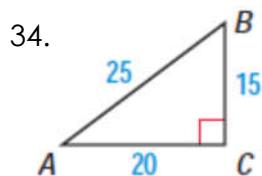


Find the value of each variable in the following 30° - 60° - 90° triangles. Write your answer in simplified radical form.



Find $\tan A$, $\sin A$ and $\cos A$. Write your answer as a fraction in simplest form.

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Approximate the value to four decimal places.

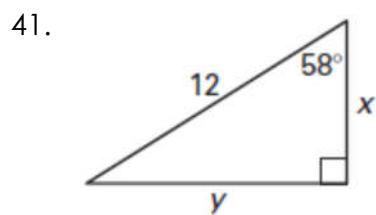
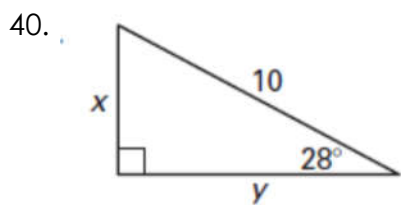
36. $\sin 57^\circ$

37. $\cos 31^\circ$

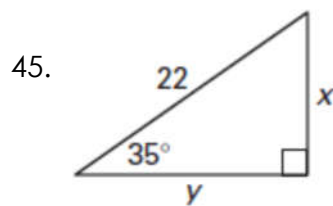
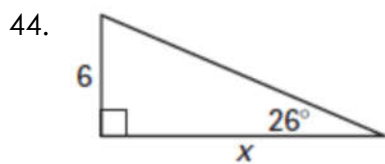
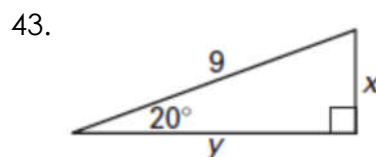
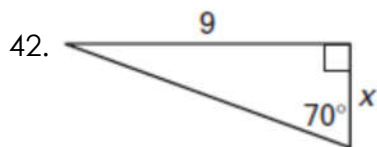
38. $\tan 17^\circ$

39. $\tan 36^\circ$

Find the length of the legs of the triangle. Round your answer to the nearest tenth.



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$\angle A$ is an acute angle. Use a calculator to approximate the measure of $\angle A$ to the nearest degree.

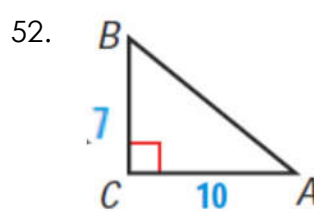
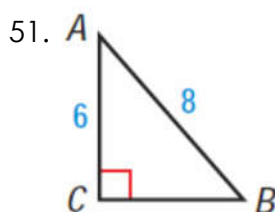
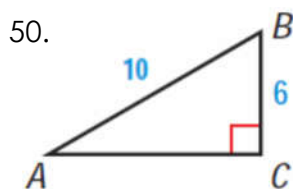
46. $\tan A = 3.2145$

47. $\sin A = 0.0888$

48. $\cos A = 0.2243$

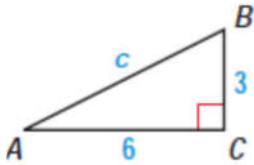
49. $\tan A = 1.2067$

Find the measure of angle A to the nearest degree.

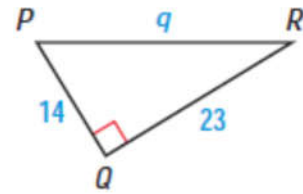


Solve the following right triangles.

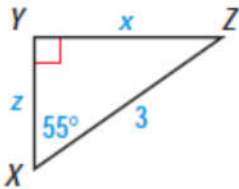
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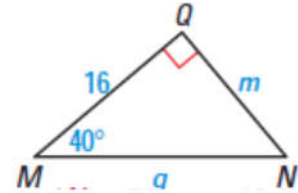


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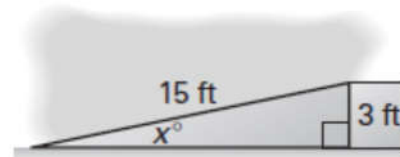


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56.



57. The length of a loading ramp is 15 feet and its height is 3 feet. Find the value of x to the nearest degree.



58. The distance from a point P on the ground to a point R at the base of a cliff is 30 meters. Find h , the height of the cliff, to the nearest meter.

