Geometry

10.1-10.3 Quiz Review

Name:_____

Simplify the following radicals.

1. $\sqrt{54}$ 2. $\sqrt{250}$ 3. $\sqrt{40}$ 4. $\sqrt{50}$

Use the Pythagorean Theorem to find the length of the hypotenuse. Write your answer in simplified radical form. ($a^2 + b^2 = c^2$)

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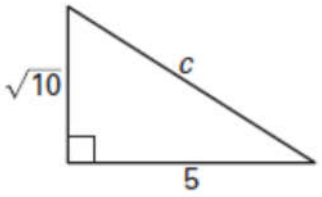

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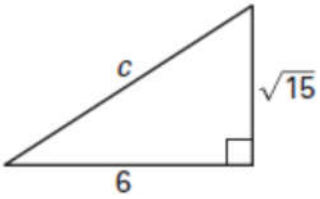

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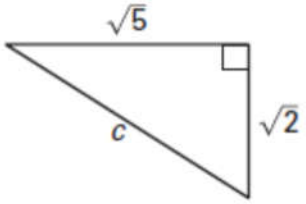


Multiply the radicals, then simplify if possible.

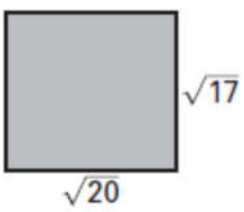
8. $\sqrt{5} \cdot \sqrt{3}$ 9. $\sqrt{10} \cdot \sqrt{2}$ 10. $3\sqrt{5} \cdot \sqrt{5}$ 11. $\sqrt{3} \cdot \sqrt{8}$

Evaluate the expression.

12. $(4\sqrt{5})^2$ 13. $(3\sqrt{2})^2$ 14. $(2\sqrt{6})^2$ 15. $(5\sqrt{3})^2$

Use the area formula A = lw to find the area of the rectangle. Round your answer to the nearest tenth.

16.



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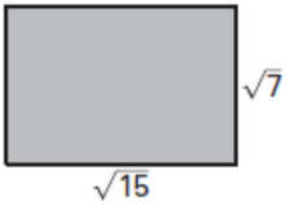

Find missing side lengths in the <u>45°- 45°- 90°</u> triangle. Write your answer in radical form.
(REMEMBER: hypotenuse = leg • $\sqrt{2}$)

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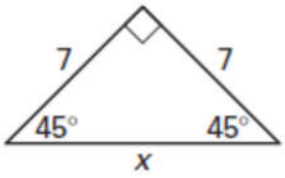

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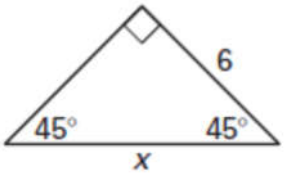

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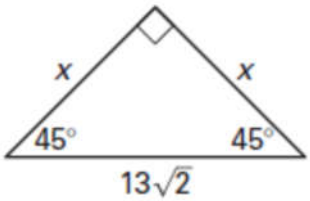

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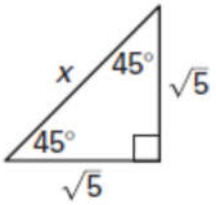

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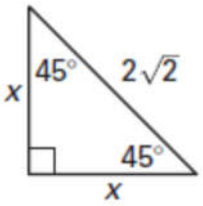

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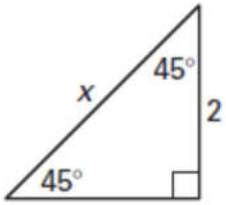

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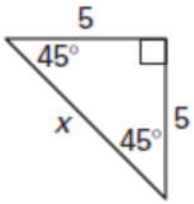

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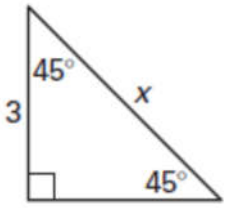

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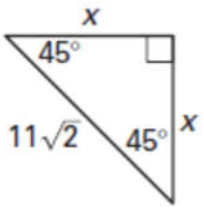
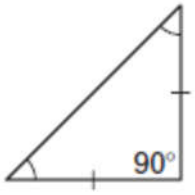


Determine whether there is enough information to conclude that the triangle is a <u>45°-45°-90° triangle.</u>

27.



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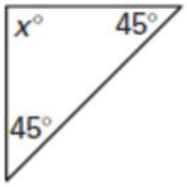
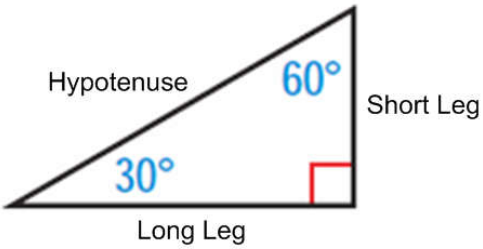


29. In a **30˚- 60˚ - 90˚ triangle,** the hypotenuse is how many times as long as the shorter leg?

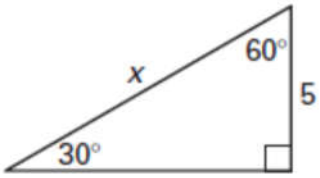
30. In a **30˚- 60˚ - 90˚ triangle,** how many times longer than the shorter leg is the longer leg?

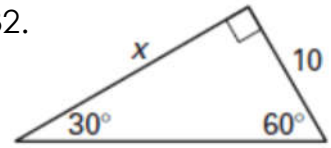
Find the value of x in the following 30˚- 60˚ - 90˚ triangles. Write your answer in simplified radical form.

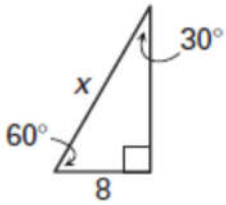


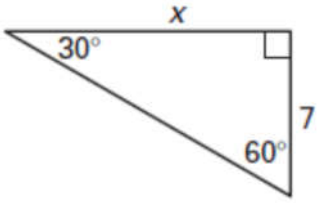
Hypotenuse = 2 • short leg

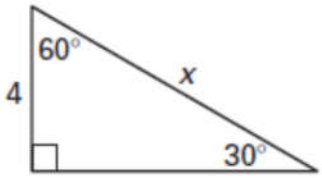
Long leg = short leg • $\sqrt{3}$

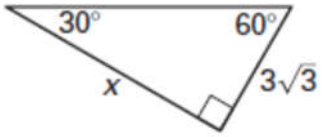
31. 

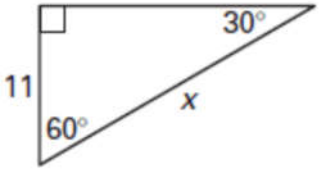
32. 

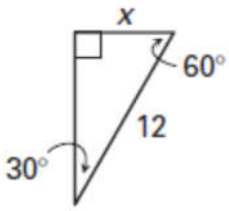
33. 

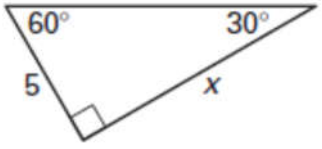
34. 

35. 

36. 

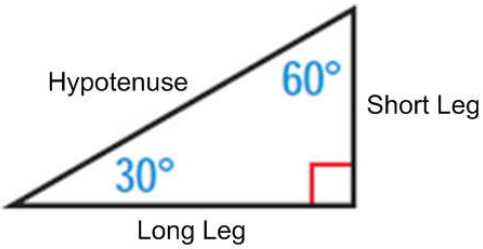
37. 

38. 

39. 

Find the value of x in the following <u>30˚- 60˚ - 90˚ triangles</u>. Write your answer in simplified radical form.

USE THIS TO HELP YOU!



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Long leg = short leg • $\sqrt{3}$

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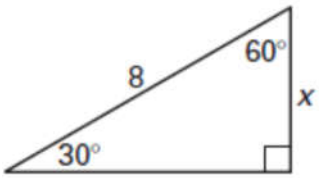

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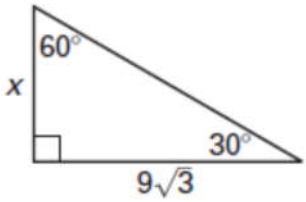

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