12.6 Exercises

Guided Practice

Vocabulary Check

1. Complete: Sides of a right triangle that are not the hypotenuse are the __?__.

2. State the hypothesis and the conclusion of the statement "If x is an even number, then x^2 is an even number."

Skill Check

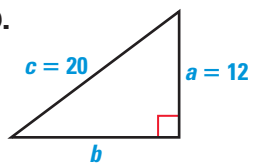
Find the missing length of the right triangle if *a* and *b* are the lengths of the legs and *c* is the length of the hypotenuse.

3. $a = 7, b = 24$ **4.** $a = 5, c = 13$ **5.** $b = 15, c = 17$

6. $a = 9, c = 41$ **7.** $b = 11, c = 61$ **8.** $a = 12, b = 35$

Find each unknown length of the right triangle.

9.



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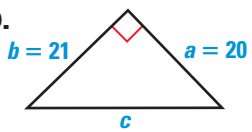

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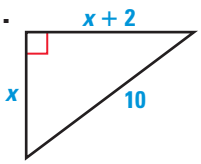


12. Explain how you can use the converse of the Pythagorean theorem to tell whether three given lengths can be sides of a right triangle.

Practice and Applications

USING THE PYTHAGOREAN THEOREM **Find the missing length of the right triangle if *a* and *b* are the lengths of the legs and *c* is the length of the hypotenuse.**

13. $a = 3, c = 4$ **14.** $a = 10, b = 24$ **15.** $b = 3, c = 7$

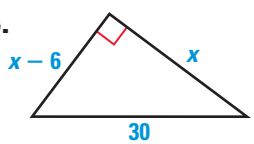
16. $b = 9, c = 16$ **17.** $a = 5, c = 10$ **18.** $a = 14, c = 21$

19. $a = 2, b = 8$ **20.** $a = 11, b = 15$ **21.** $b = 3, c = 10$

22. $b = 1, c = 3$ **23.** $a = 4, c = 7$ **24.** $a = 8, c = 10$

MISSING LENGTH **Find the unknown lengths of the right triangle.**

25.



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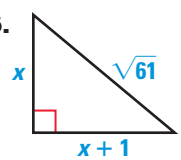

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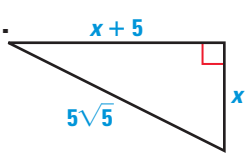

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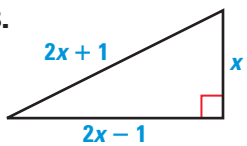

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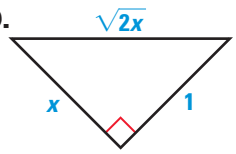

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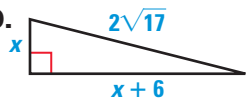

Student Help

HOMEWORK HELP
Example 1: Exs. 13–24
Example 2: Exs. 25–30
Example 3: Exs. 31–35
Example 4: Exs. 36–41
Example 5: Exs. 42–44