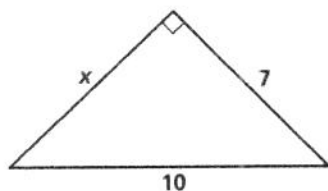


Practice 8-1

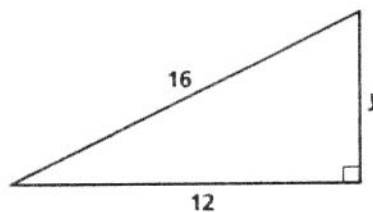
The Pythagorean Theorem and Its Converse

Find the value of each variable. Leave your answers in simplest radical form.

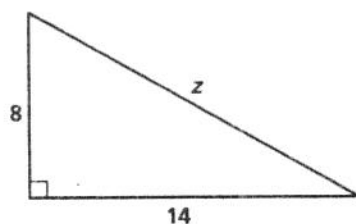
1.



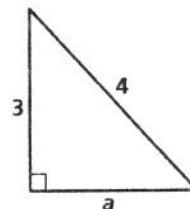
2.



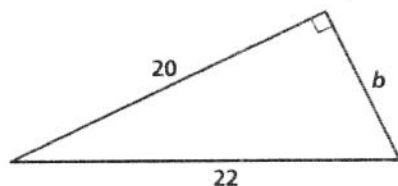
3.



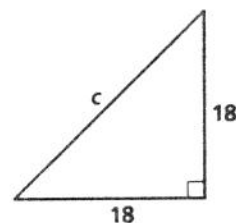
4.



5.

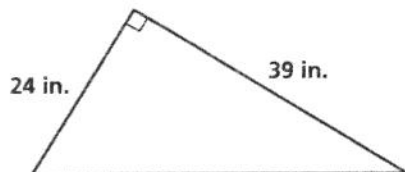


6.

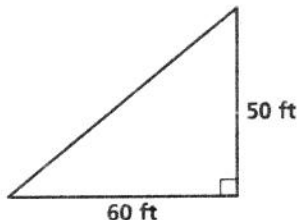


Find the length of each hypotenuse. Use your calculator, and round your answers to the nearest whole number.

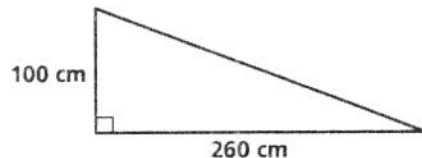
7.



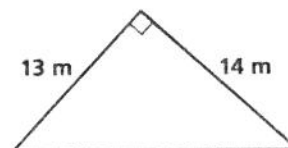
8.



9.



10.



The numbers represent the lengths of the sides of a triangle. Classify each triangle as *acute*, *obtuse*, or *right*.

11. 6, 9, 10

12. 18, 24, 30

13. 20, 100, 110

14. 7, 24, 25

15. 2, 5, 6

16. 13, 21, 24

8-1 Pythagorean Theorem and Its Converse (word problems)

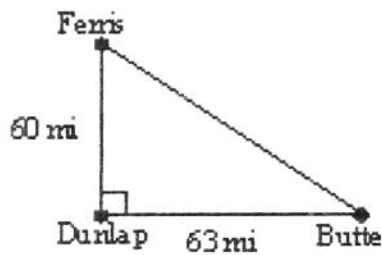
Draw and label the figures. Show the equation you use to solve the problem

1. The length of the hypotenuse of a right triangle is 26 and the length of one leg is 24. Find the other leg.

2. Find the measure of the diagonal of a rectangle whose sides measure 20 and 15.

3. Find the length of a side of a square whose diagonal measures 16 in. Round to the nearest tenth.

4. Leslie used the diagram to compute the distance from Ferris to Dunlap to Butte. How much shorter is the distance directly from Ferris to Butte than the distance Leslie found?



5. Find the length of the leg of the right triangle given a hypotenuse of 16 and a leg of 12. Leave your answer in simplest radical form.

6. Use the converse of the Pythagorean Theorem to determine which of these triples could represent the sides of a right triangle. (27, 36, 45) (12, 17, 20) (24, 32, 40) (14, 48, 50)