

Does each set of numbers form a Pythagorean triple? Explain.

13. 4, 5, 6

14. 10, 24, 26

15. 15, 20, 25

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



27. 4, 5, 6

28. 0.3, 0.4, 0.6

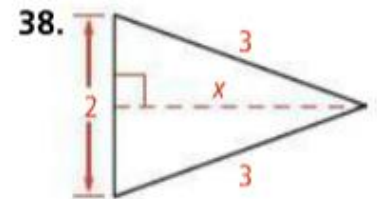
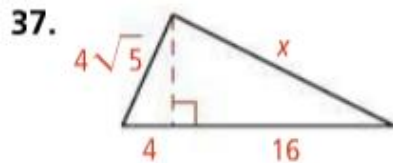
29. 11, 12, 15

30.  $\sqrt{3}$ , 2, 3

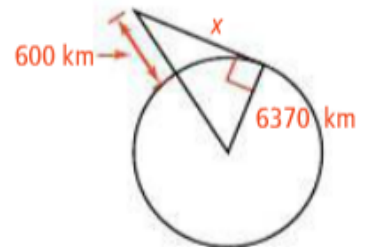
31. 30, 40, 50

32.  $\sqrt{11}$ ,  $\sqrt{7}$ , 4

**Algebra** Find the value of  $x$ . If your answer is not an integer, express it in simplest radical form.



50. **Astronomy** The Hubble Space Telescope orbits 600 km above Earth's surface. Earth's radius is about 6370 km. Use the Pythagorean Theorem to find the distance  $x$  from the telescope to Earth's horizon. Round your answer to the nearest ten kilometers. (Diagram is not to scale.)



51. Prove that if the slopes of two lines have product  $-1$ , then the lines are perpendicular. Use parts (a)–(c) to write a coordinate proof.

55. A 16-ft ladder leans against a building, as shown. To the nearest foot, how far is the base of the ladder from the building?
56. What is the measure of the complement of a  $67^\circ$  angle?
57. The measure of the vertex angle of an isosceles triangle is 58. What is the measure of one of the base angles?
58. The length of rectangle  $ABCD$  is 4 in. The length of similar rectangle  $DEFG$  is 6 in. How many times greater than the area of  $ABCD$  is the area of  $DEFG$ ?

