1) Describe where to find the hypotenuse of a triangle.

2) What is the length of the missing side, \( x \)?

3) A 13 foot ladder leans against the side of a house. The base of the ladder is 5 feet from the house. How far up the house will the ladder reach?

4) Which of the following side lengths would make a right triangle? (there is only ONE answer)
   a) 3, 4, 6
   b) 6, 9, 22
   c) 8, 34, 36
   d) 7, 24, 25

5) What is the length of the missing side, \( x \)?

6) Two joggers run 8 miles north and then 5 miles west. What is the shortest distance, to the nearest tenth of a mile, they must travel to return to their starting point?

7) Each desk in a school is 2 feet long by 3 feet wide. If you want to draw a diagonal line across a desk, how long will this line be?
8) Which of the following side lengths would make a right triangle? (there is only ONE answer)
   a) 9, 40, 41
   b) 9, 39, 40
   c) 10, 13, 15
   d) 10, 12, 18

9) What is the length of the missing side, x?

![Diagram](image)

10) Annie measures her television at home. It measures 12 inches by 16 inches. What is the diagonal length of the television?

11) What is the length of the missing side, x?

![Diagram](image)

12) What is the length of the missing side, x?

![Diagram](image)

13) Don placed the top of his ladder exactly 8 feet up the wall of the house. If the ladder is 10 feet long, how far from the base of the house must the ladder be?
14) Find the length of the line segment below.

15) Find the length of the line segment below.

16) Find the length of the line segment below.

State if each triangle is a right triangle.

17) 13 yd 5 yd
    12 yd

18) 8 cm
    6 cm 13 cm

19) 6 mi 8 mi
    11 mi

20) 9 m 12 m
    15 m