HW: Worksheet

Warm up:

Solve for x.

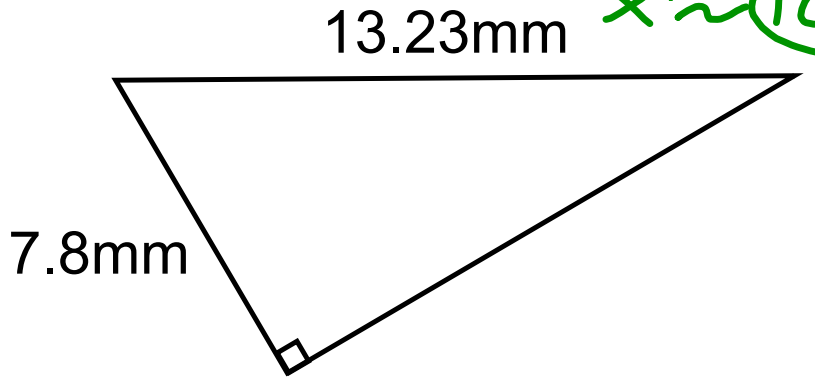
$7.8^2 + x^2 = 13.23^2$

$60.84 + x^2 = 175.0329$

$-60.84 \quad -60.84$

$\sqrt{x^2} = \sqrt{114.1929}$

$x \approx 10.69\text{mm}$



HW Solutions

(14) $a^2 + b^2 \stackrel{?}{=} c^2$

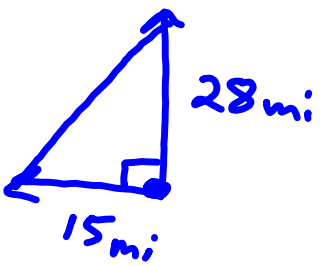
$28^2 + 195^2 \stackrel{?}{=} 197^2$

$784 + 38025$

$38809 = 38809$

Yes

Two trains left New York City. The train traveling north went 28 miles. The other train, which was traveling west, went 15 miles. How far apart are the trains?



$28^2 + 15^2 = x^2$

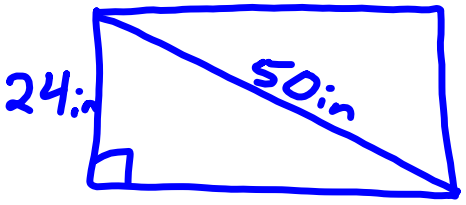
$784 + 225$

$\sqrt{1009} = \sqrt{x^2}$

$31.76 \approx x$

31.76 mi

You want to buy a 50 inch TV. You found one for sale with a listed height of 24 inches. What is the width of the TV?



$24^2 + x^2 = 50^2$

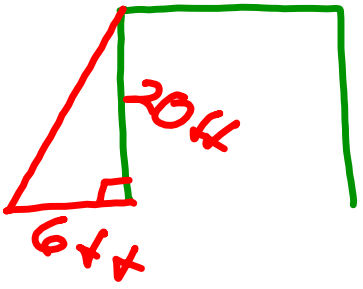
$576 + x^2 = 2500$

$-576 \quad -576$

$x^2 = 1924$

$x \approx 43.86$ in

Tom wants to clean the gutters on his house. His house is 20 feet tall and he wants to put the base of the ladder 6 feet from the house. What size ladder does he need to buy?



$6^2 + 20^2 = x^2$

$36 + 400$

$\sqrt{436} = \sqrt{x^2}$

$20.88 \approx x$

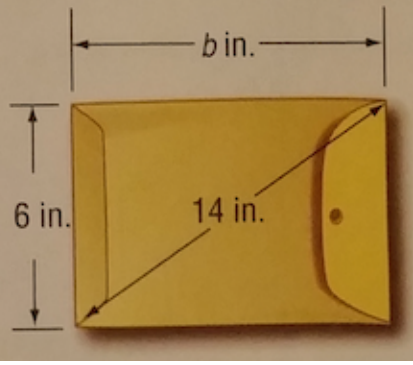
20.88 ft

Practice

April 8, 2022

TRAVEL The Research Triangle in North Carolina is formed by Raleigh, Durham, and Chapel Hill. Is this triangle a right triangle? Explain.

POSTAGE An envelope is classified as a *large* envelope if the length exceeds 11.5 inches. Is the envelope below a large envelope?



A guywire 20m long is attached to the top of a telephone pole. The guywire is just able to reach a point on the ground 12m from the base of the telephone pole. Find the height of the telephone pole.

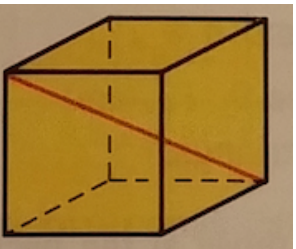
A baseball diamond is a square 90ft on a side. What is the length from first base to third base?

The dimensions of a rectangular doorway are 200cm by 90cm. Can a table top with a diameter of 210cm be carried through the doorway?

The base of an isosceles triangle is 18cm long. The equal sides are each 24cm long. Find the altitude.

Seth made a small rectangular table for his workroom. The sides of the table are 36" and 18". If the diagonal of the table measures 43", is the table square? A table which is "square" has right angles at the corners.

What is the length of each diagonal of a cube that is 45 cm on each side?



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