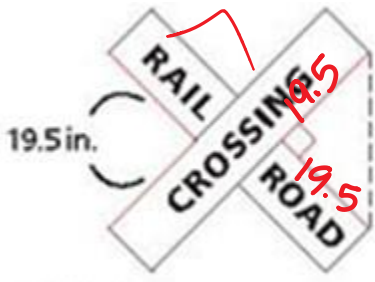


Name: Answer Key

Section 5.8 Day 1 Homework

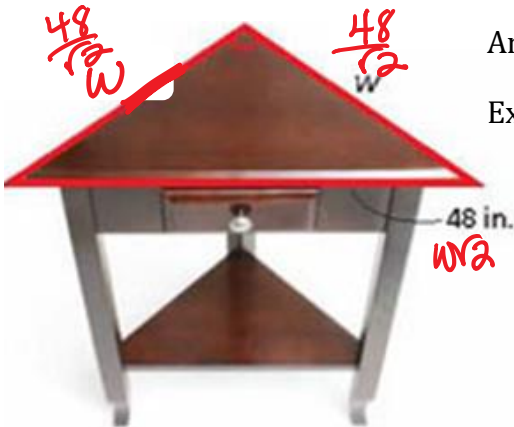
1. The two arms of the railroad sign are perpendicular bisectors of each other. In Pennsylvania, the lengths marked in red must be 19.5 inches. What is the distance labeled d ? Round to the nearest tenth of an inch.



Answer: 27.6 in

Explanation: Since the arms form a right triangle with both leg lengths of 19.5, an isosceles right Δ is formed. The ratio of the sides in this type of Δ are s - s - $s\sqrt{2}$. Since each leg is 19.5, I would multiply that by $\sqrt{2}$ to get an approx distance of 27.6 in.

2. DESIGN: This tabletop is an isosceles right triangle. The length of the front edge of the table is 48 inches. What is the length w of each side edge? Round to the nearest tenth of an inch.



Answer: 33.9 in

Explanation:

Because this is an isos. right triangle, the legs are both w and the hypotenuse is $w\sqrt{2}$. Since the hypotenuse was given, I would \div 48 by $\sqrt{2}$ to get an approx. leg length of 33.9 in.

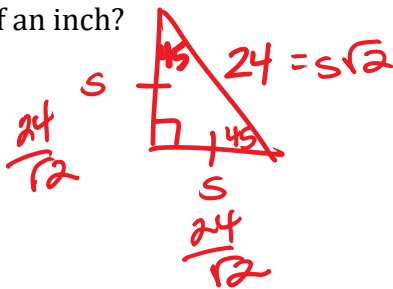
3. The length of the hypotenuse of an isosceles right triangle is 24 inches. What is the length of one leg of the triangle, rounded to the nearest tenth of an inch?

A) 13.9 inches

C) 33.9 inches

B) 17.0 inches

D) 41.6 inches



Answer: B

Explanation: This is an isos. right triangle thus each leg can be labeled as s and the hypotenuse as $s\sqrt{2}$. Since we were given a hypotenuse of 24, I would \div by $\sqrt{2}$. This would give an approx. leg length of 17.