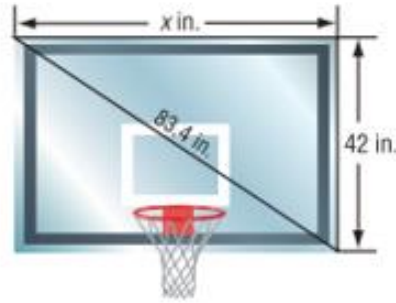


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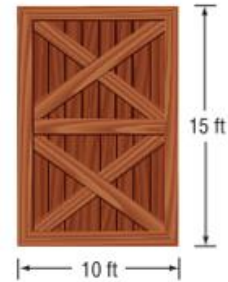


Unit 2 Day 6 - Using the Pythagorean Theorem Assignment

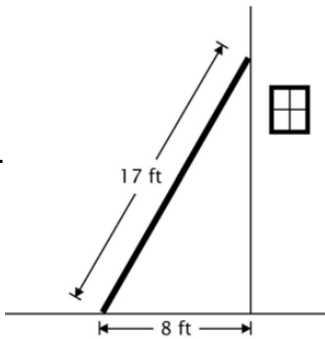
1. Find the width of the backboard.



2. A barn door is 10 feet wide and 15 feet tall. A square plank 16 feet on each side must be taken through the doorway. Can the plank fit through the doorway? Justify your answer.

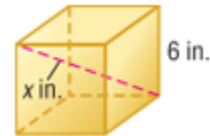


3.

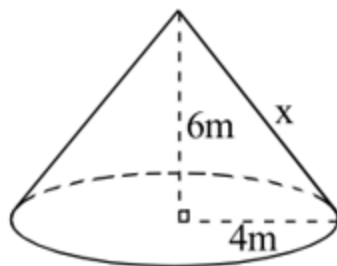


Anna leaned a 17-foot ladder against the side of a house. The bottom of the ladder is 8 feet from the house. How high up the side of the house is the top of the ladder?

4. What is the length of the diagonal in the cube shown at the right?



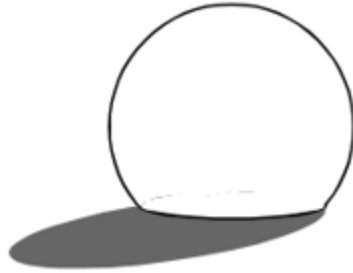
5. Solve for x .



6. The measures of three sides of a triangle are 9, 16, and 20. Determine whether the triangle is a right triangle. Explain your answer.

7. The size of a television screen is given by the length of the diagonal of the screen. What size is a television screen that is 21.6 inches wide and 16.2 inches high?

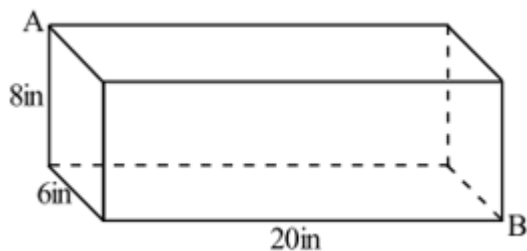
8. When completely inflated, a basketball has a diameter of 10 inches. A partially deflated basketball sits on the ground so that the flat part makes a circle on the floor with a 4-inch radius. What is the height of the partially-deflated basketball?



9. Claire and Drew are driving to their friend Peter's house for a birthday party. Claire drives nine miles north and six miles east to get to Peter's house, while Drew drives three miles south and 7 miles west to get there. How far does Claire live from Drew?

10. Riding your bicycle, you roll over an ant who squishes on the bottom of your 24-inch (diameter) bicycle tire (oops!). You roll forward and the tire makes a $\frac{1}{3}$ (120 degree) rotation. How high above the ground is the ant on the tire?

11. An ant is crawling inside of a box with the dimensions below. What is the **shortest possible distance** the ant can walk along the inside of the box to get from corner A to the food at corner B?



YOU HAVE ONLY FAILED IF YOU HAVE GIVEN UP.