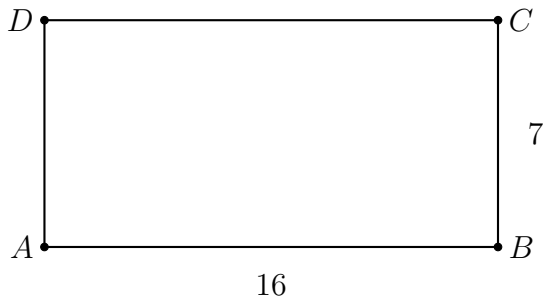
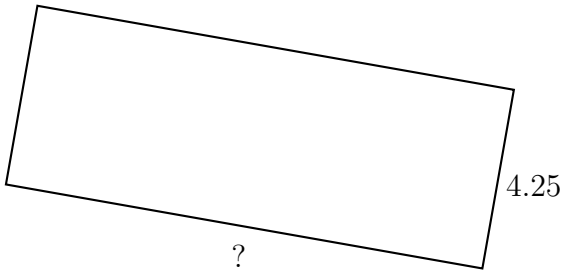
4.4 Do Now: Area, volume, perimeter

1. Given the rectangle $ABCD$ shown below, with length 16 and width 7. Find the figure's area.

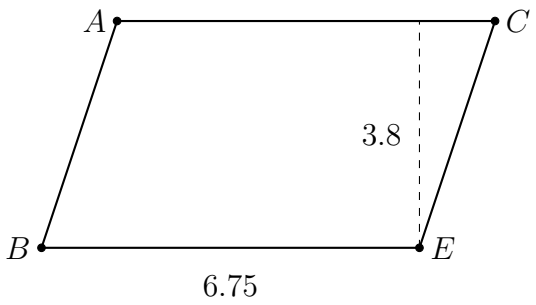


2. The area of a rectangle is 51 square inches and one side is 4.25 inches high. What is its other dimension, the length?

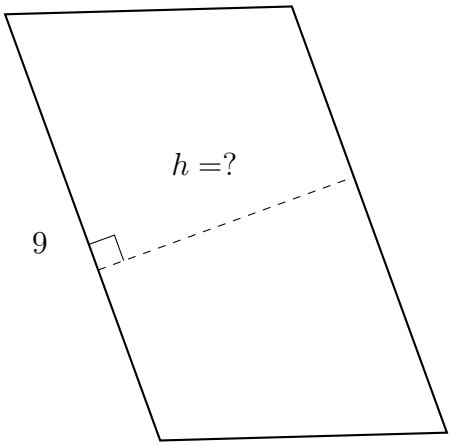


3. Draw a square that has an area of 16 square centimeters. Label its sides with their length and state the length of the square's perimeter.

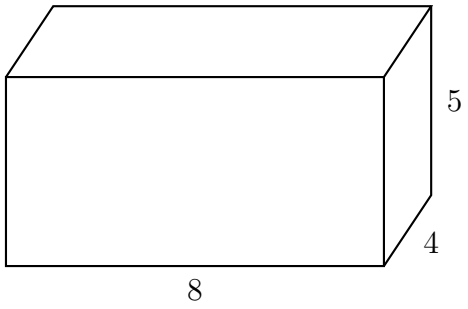
4. Find the area of the parallelogram $BECA$ shown below, with base $BE = 6.75$ and height $h = 3.8$.



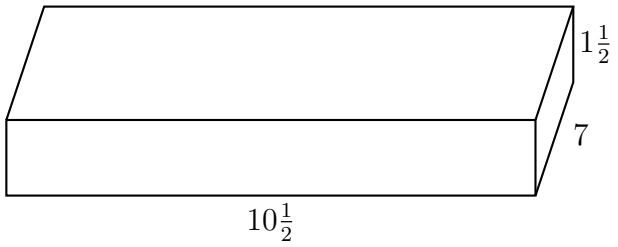
5. The area of the parallelogram shown below is 49.5 sq. cm. (not drawn to scale). Its longer sides are 9 cm long. Find the length of a perpendicular between the two longer sides, h.



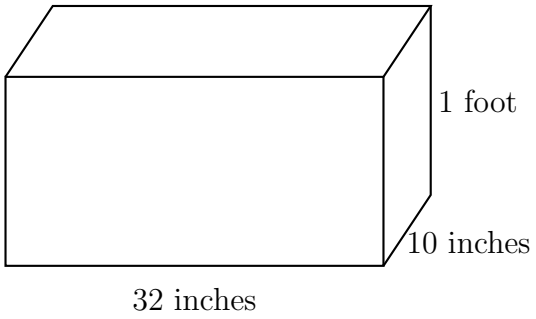
6. Find the volume of a box (rectanglar prism) having a length of 8 centimeters, a depth of 4 cm, and a height of 5 cm. Show the calculation.



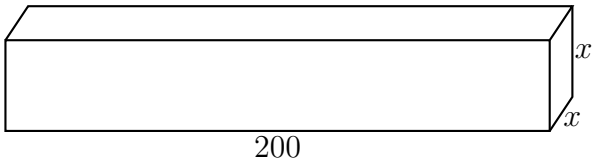
7. A cardboard mailing carton is $10\frac{1}{2}$ inches long, 7 inches wide, and $1\frac{1}{2}$ inches tall. Find the volume of the box. Show the calculation.



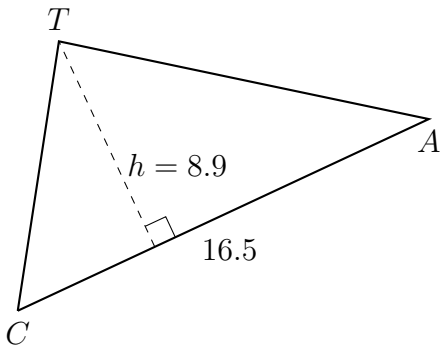
8. Find the volume of a packing crate 32 inches long, 10 inches wide, and 1 foot tall. Show the calculation.



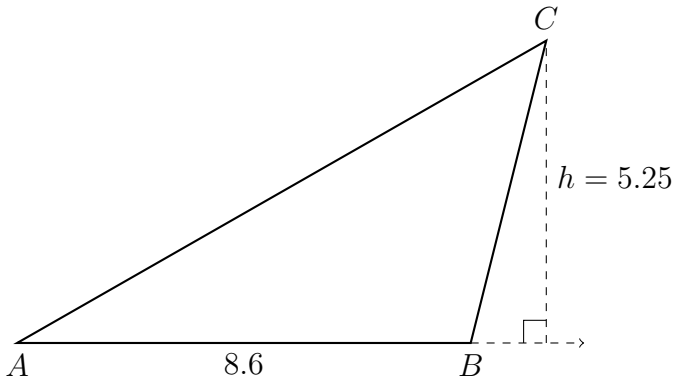
9. A wooden post laying on the ground is 200 centimeters long. The post's cross section is square. If its volume is 12,800 cubic centimeters, what is the dimension of each side of its square end, x? (not to scale)



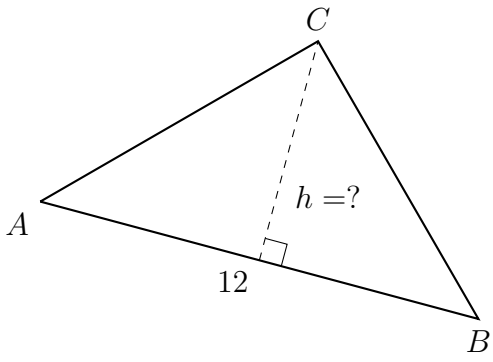
10. Find the area of $\triangle CAT$. The altitude h of the triangle is 8.9 centimeters and the base $CA = 16.5$ cm. Show work by writing an equation before making the calculation.



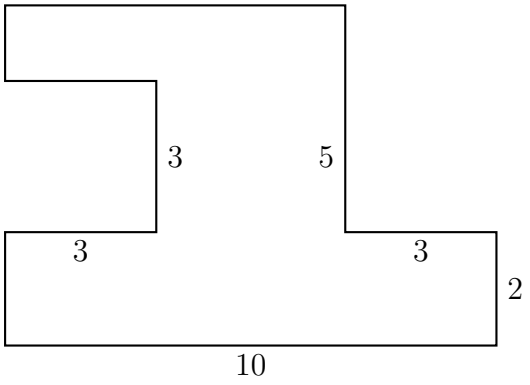
11. The side $\overline{AB}$ of triangle ABC is extended and an altitude to the vertex C is drawn, as shown below. The triangle's height is $h = 5.25$ and its base measures $AB = 8.6$. Find the area of the triangle.



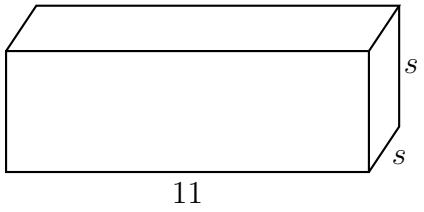
12. One side of the $\triangle ABC$ has a length $AB = 12$. The triangle's area is 114. Find the length of the altitude h of the triangle to vertex C and perpendicular to side $\overline{AB}$.



13. The shape shown below is composed of straight lines and right angles, with some lengths as marked. Find the area of the figure. (the figure is not drawn to scale)

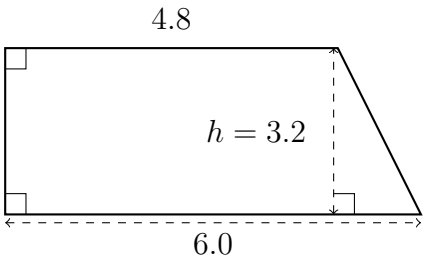


14. The volume of the rectanglar prism shown is 99 cubic meters. Its length is 11 meters. Its cross section is square with length s (i.e. the base is square). Find s. Show the calculation. (not drawn to scale)

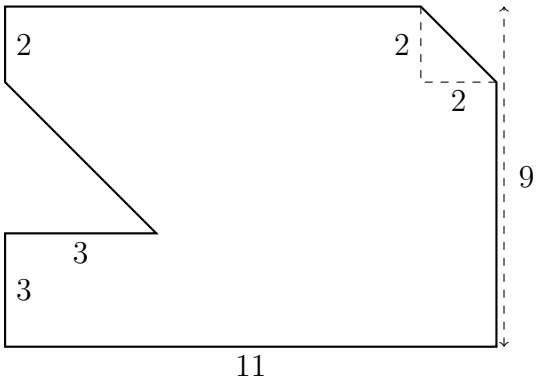


15. The shape shown below is a trapezoid. Its height is 3.2 cm and the longer base is 6.0 cm. The shorter side opposite the base is 4.8 cm.

    Find the area of the figure.



16. A rectangle has two triangular cutouts as shown with lengths marked. Find the area of the figure. (the figure is not drawn to scale)



17. The length of the given rectangle is 10 more than the width. Its area is 75. Find the length and width of the rectangle using an algebraic method.

(the drawing is not to scale)