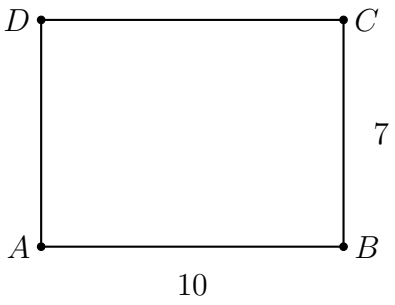
1.11 Review: Length and area

Show units if given. Show calculation as an equation, starting with a capitalized variable.

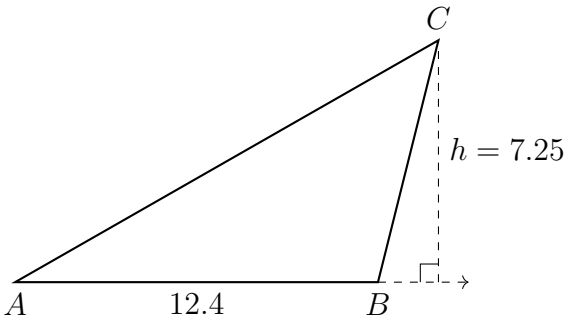
1. The rectangle $ABCD$ with dimensions $AB = 10$ inches, $BC = 7$ in.



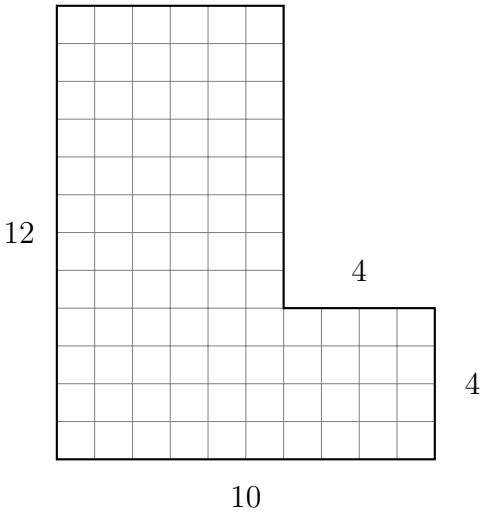
   (a) Find the area of the rectangle.

   (b) Find its perimeter.

2. 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 $h = 7.25$ and its base measures $AB = 12.4$. Find the area of the triangle.



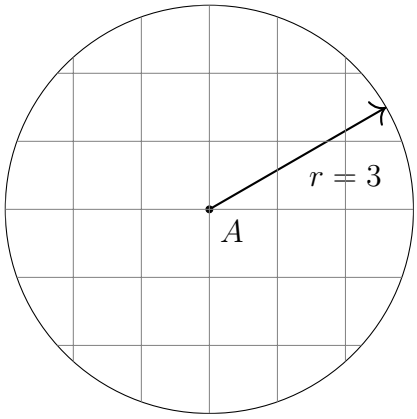
3. Find the area of the compound rectangular shape. Use area formulas for full credit.



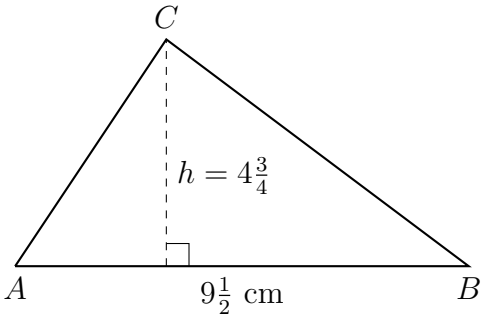
4. Given the circle A with radius $r = 3$. Leave exact answers, in terms of π.

   (a) Find the circumference of circle A.

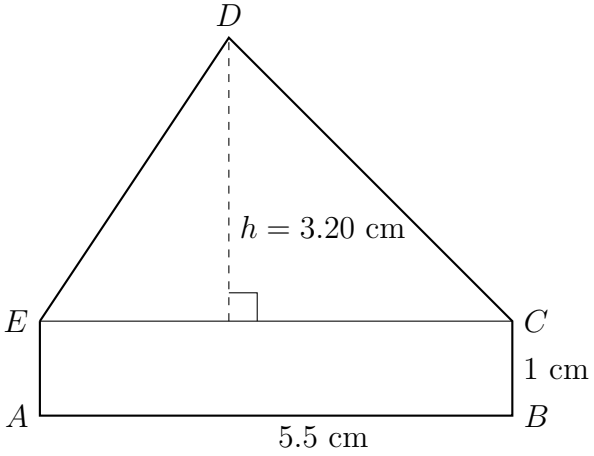
   (b) Find the area of the circle.



5. Find the area of $\triangle ABC$. The altitude h of the triangle is $4\frac{3}{4}$ centimeters and the base $AB = 9\frac{1}{2}$ cm. (diagram not to scale)



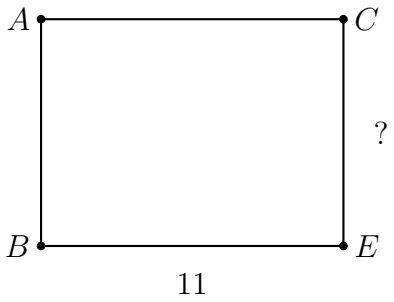
6. Find the area of shape $ABCDE$ below, a triangle on a rectangle. The altitude h of the triangle is 3.20 centimeters and the base $AB = 5.5$ cm. The rectangle is 1 cm tall. (diagram not to scale)



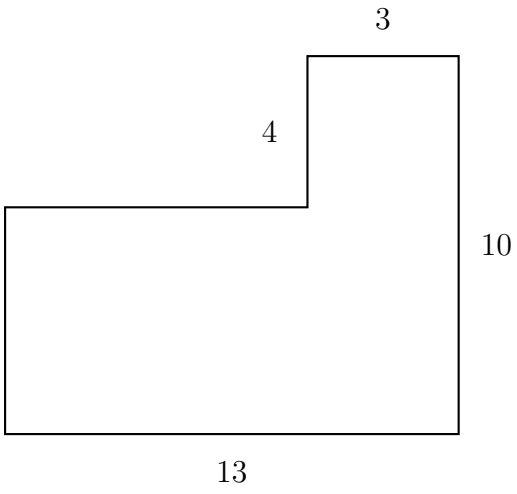
7. A rectangle has an area of 44 square inches. Its width is 4 inches. Find its length.

8. A triangle has an area of 75 square centimeters. Its height is 12 centimeters. Find the length of its base.

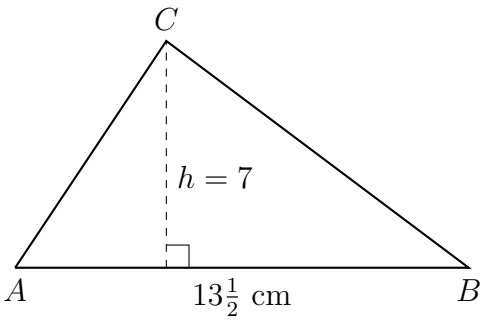
9. The rectangle $BECA$ has an area of 77, with length $BE = 11$.
   (a) Write an equation with the unknown w as the width of the rectangle.
   (b) Solve.



10. Find the area and perimeter of the shape shown below. Mark the missing side lengths first. All angles are 90°. *(not drawn to scale)*



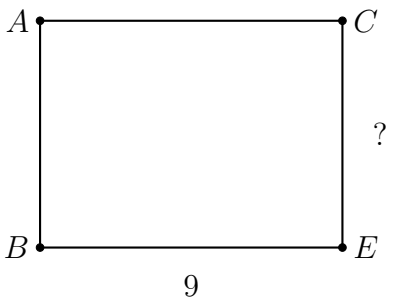
11. Find the area of $\triangle ABC$. The altitude h of the triangle is 7 centimeters and the base $AB = 13\frac{1}{2}$ cm. (diagram not to scale)



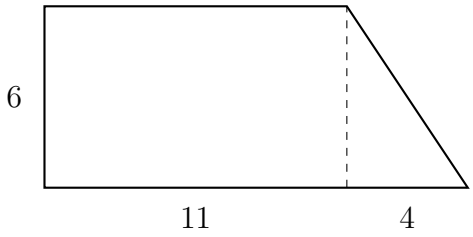
12. The rectangle $BECA$ has an area of 63, with length $BE = 9$.

    (a) Write an equation with the unknown w as the width of the rectangle.

    (b) Solve.



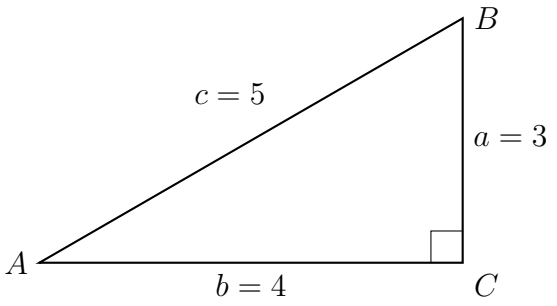
13. The compound shape shown below is composed of a rectangle 6 inches by 11 inches, and a triangle with base 4 inches. Find the total area of the combined shape.



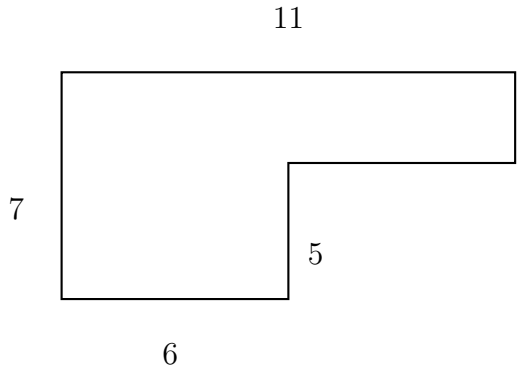
14. A triangle has an area of 68 square centimeters. Its height is 16 centimeters. Find the length of its base.

15. The perimeter of a square is 10 inches. Find its area.

16. Find the area of $\triangle ABC$ shown below (not actual size) with $m\angle C = 90°$ and the lengths of the triangle's sides as $a = 3$, $b = 4$, and $c = 5$.

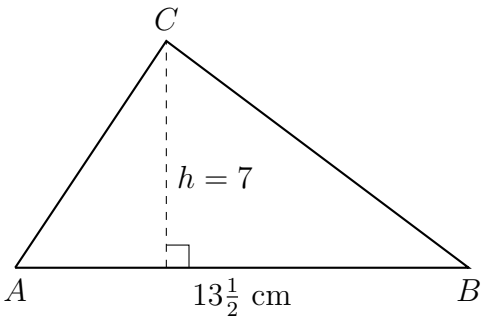


17. Find the area and perimeter of the shape shown below. Mark the missing side lengths first. All angles are 90°. *(not drawn to scale)*



18. Find the area of $\triangle ABC$. The altitude h of the triangle is 7 centimeters and the base $AB = 13\frac{1}{2}$ cm. (diagram not to scale)

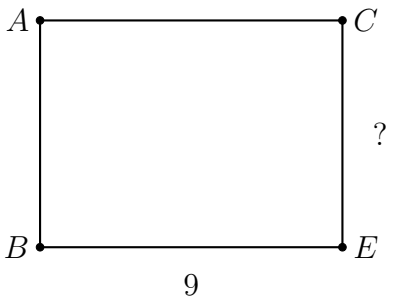
6



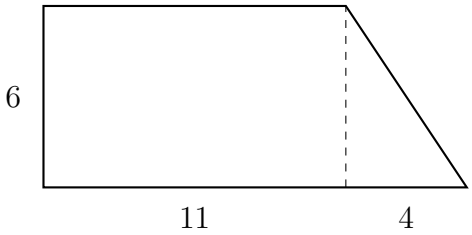
19. The rectangle $BECA$ has an area of 63, with length $BE = 9$.

    (a) Write an equation with the unknown w as the width of the rectangle.

    (b) Solve.



20. The compound shape shown below is composed of a rectangle 6 inches by 11 inches, and a triangle with base 4 inches. Find the total area of the combined shape.



21. Find the area A of the shape shown below in terms of unit squares.