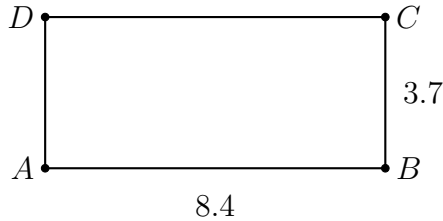
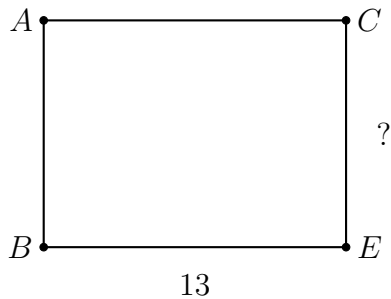


2.9 Exam: Area, perimeter, line segments

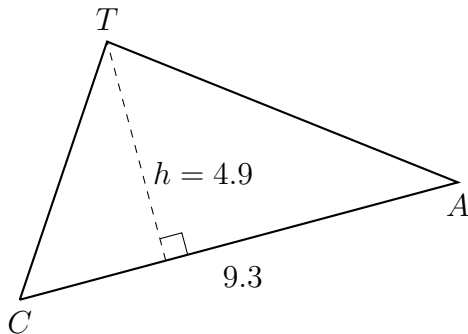
1. Given the rectangle $ABCD$ shown below, with $AB = 8.4$ and $BC = 3.7$. Find the area of the rectangle.



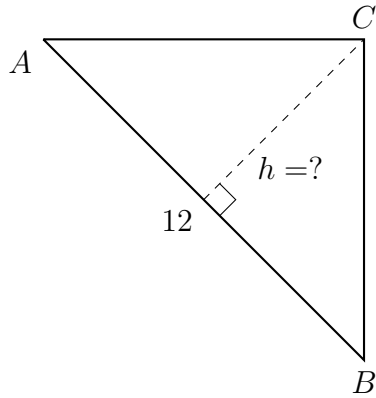
2. The rectangle $BECA$ has an area of 143, with length $BE = 13$. Find the width of the rectangle EC . (the drawing is not to scale)



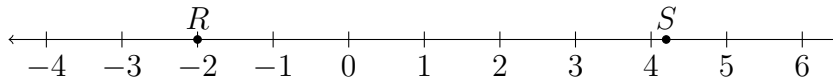
3. Find the area of $\triangle CAT$. The altitude h of the triangle is 4.9 centimeters and the base $CA = 9.3$ cm.



4. One side of the $\triangle ABC$ has a length $AB = 12$. The triangle's area is 30. Find the length of the altitude h of the triangle to vertex C and perpendicular to side \overline{AB} .



5. Given \overleftrightarrow{RS} as shown on the number line, with $R = -2.0$ and $S = 4.2$.

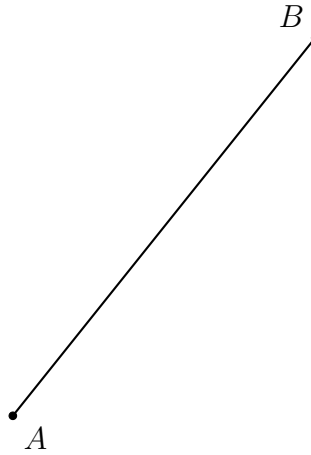


- (a) What is the exact distance on the number line between the points R and S ?

- (b) The point T bisects \overline{RS} . Find the value of T , and mark and label it on the numberline \overleftrightarrow{RS} .

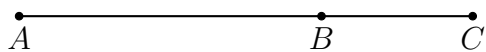
Name:

6. Complete the construction of a perpendicular bisector of \overline{AB} . Label the midpoint M .



7. Given \overline{ABC} , $AB = 6\frac{2}{5}$, and $AC = 9$.

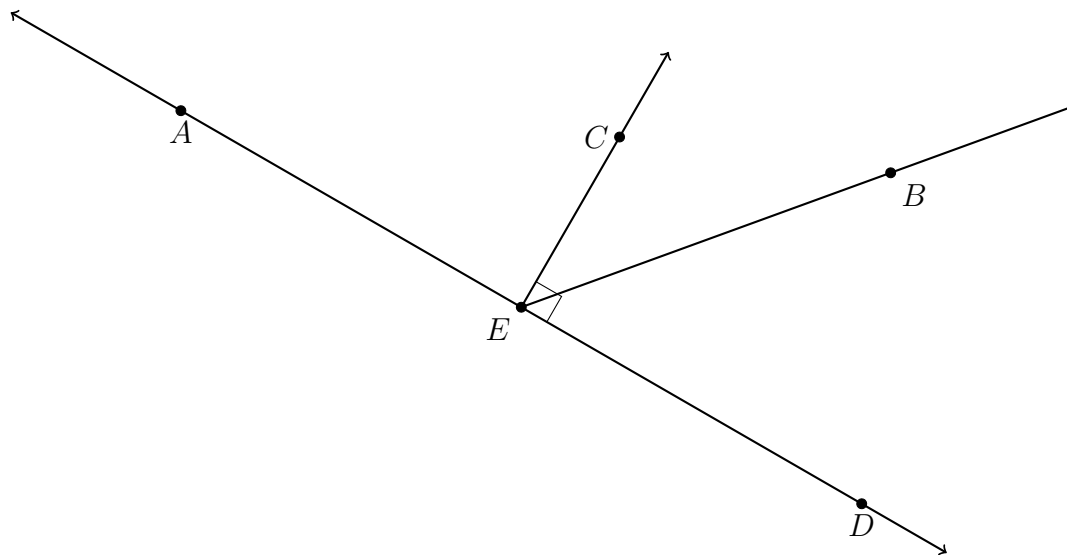
Find BC .



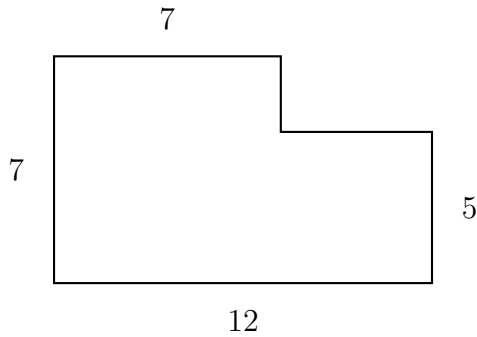
The postulate used in this problem is the _____.

8. Given the diagram shown below.

- (a) Measure the angle AEB . $m\angle AEB =$ _____
- (b) Name an angle that is supplementary to $\angle DEB$: _____
- (c) Name a pair of opposite rays: _____



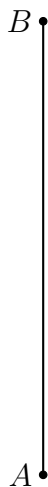
9. Find the perimeter P of the shape shown below, given the side lengths marked (not drawn to scale). All angles are 90° . Completely mark the diagram with the two missing lengths and show an equation for P as a sum of each side's length.



10. Given the collinear points P , Q , and R , with $PQ = 4x + 4$, $QR = 2x + 2$, and $PR = 5x + 12$. Find PQ .

Complete all steps for full credit: the drawing to the top right, an equation and solution for x on the left, followed by the answer to the question. Write the check to the bottom right.

11. Complete the construction of an equilateral triangle with one side as \overline{AB} .



- (a) Identify two circles in the construction. For each, name the center of the circle and the radius.
- (b) Assuming that the third vertex of the triangle is point C , explain why the distance from A to C is the same as the distance from A to B .

Name:

Early finishers, spicy: Solve for x by factoring

12. $x^2 + 6x + 5 = 0$

13. $x^2 + 5x = 14$