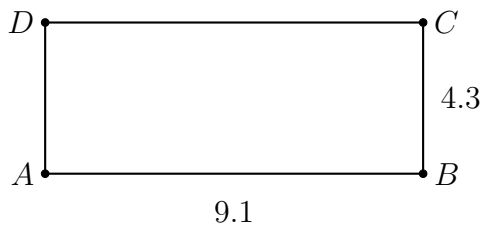
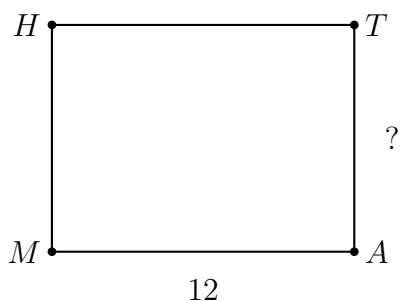


**2-7Pretest-areas+numberlines**

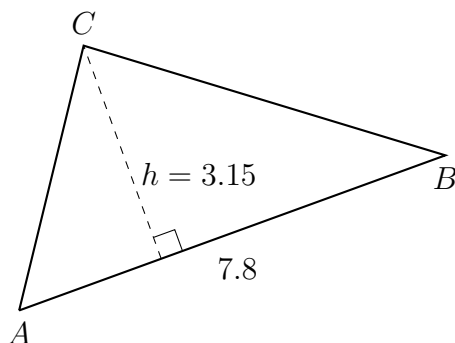
1. Given the rectangle  $ABCD$  shown below, with  $AB = 9.1$  and  $BC = 4.3$ . Find the area of the rectangle.



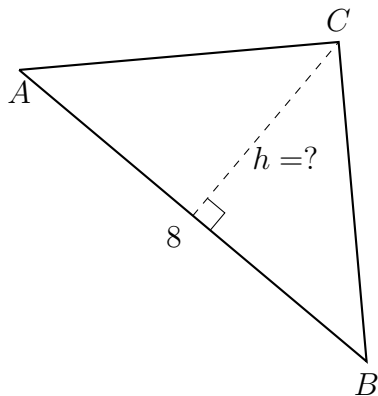
2. The rectangle  $MATH$  has an area of 102, with length  $MA = 12$ . Find the width of the rectangle  $AT$ .



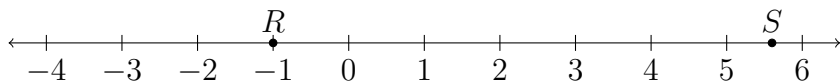
3. Find the area of  $\triangle ABC$ . The altitude  $h$  of the triangle is 3.15 centimeters and the base  $AB = 7.8$  cm.



4. One side of the  $\triangle ABC$  has a length  $AB = 8$ . The triangle's area is 44. Find the length of the altitude  $h$  of the triangle to vertex  $C$  and perpendicular to side  $\overline{AB}$ .



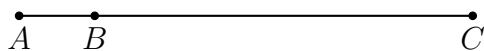
5. Given  $\overleftrightarrow{RS}$  as shown on the number line, with  $R = -1.0$  and  $S = 5.6$ .



- (a) What is the exact distance on the number line between the points  $R$  and  $S$ ?
- (b) The points  $T$  and  $U$  trisect  $\overline{RS}$ . Find the values of  $T$  and  $U$ , and mark and label them on the numberline  $\overleftrightarrow{RS}$ .

6. Given  $\overline{ABC}$ ,  $AB = \frac{2}{3}$ , and  $AC = 3\frac{1}{3}$ .

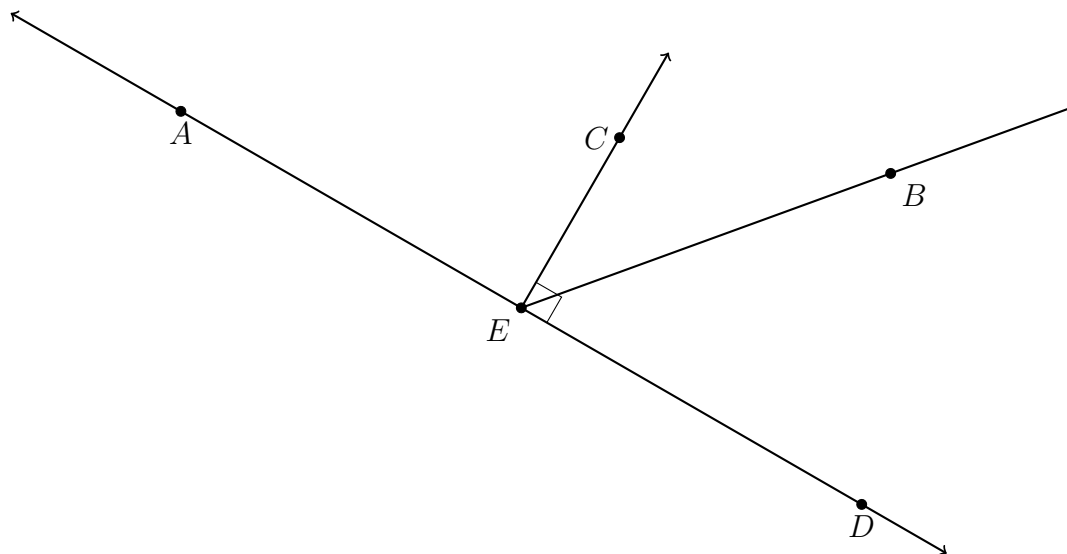
Find  $BC$ .



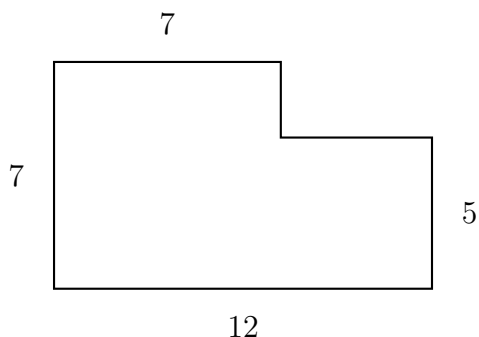
The postulate used in this problem is the \_\_\_\_\_.

7. 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: \_\_\_\_\_



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



9. 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.