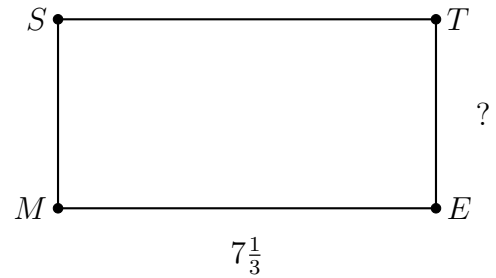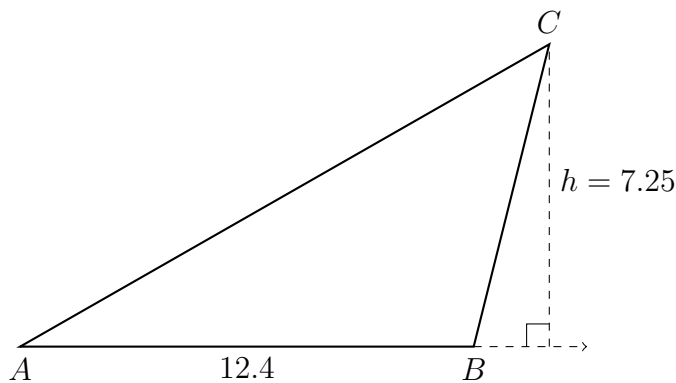**3-2DN-Area+volume**

1. The area of the rectangle $METS$ shown below is 22 square inches. Given that the length $ME = 7\frac{1}{3}$ inches, find the width ET.

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 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.
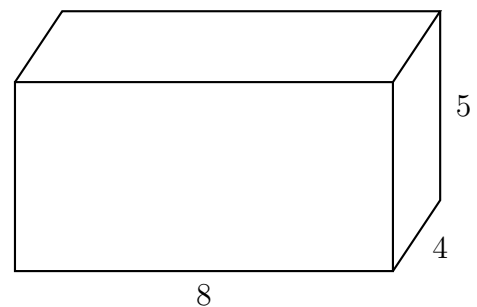
4. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = 4x + 30$ and $m\angle 3 = 8x - 10$, find $m\angle 1$. (check your solution)
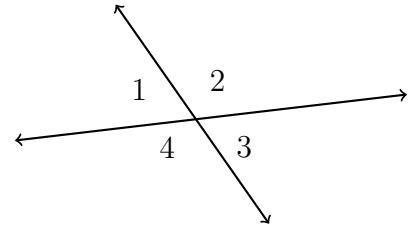
5. The volume of the rectanglar prism shown is 80 cubic meters. Its length is 10 meters and depth 4 m. Find its height h. Show the calculation. (not drawn to scale)

$h = ?$

4

10
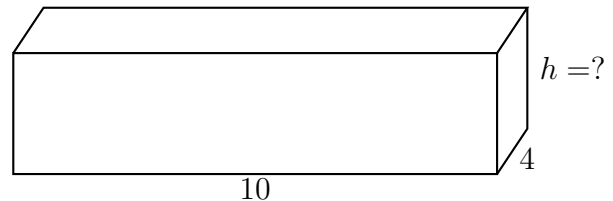
6. The shape shown below is a trapezoid. Its height is 2 cm and the longer base is 8 cm. The shorter side opposite the base is 7 cm.

Find the area of the trapezoid by adding the rectangular area to the triangle part.

7

$h = 2$

8