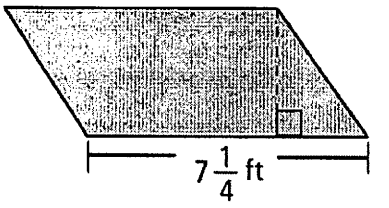
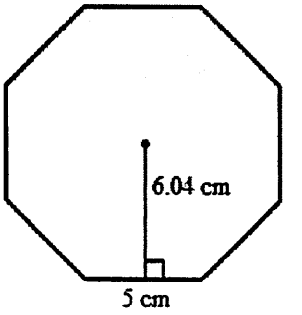
# Topic 13: Area Quiz Review

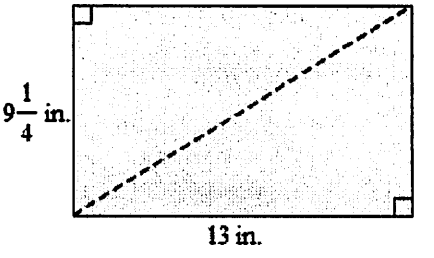
1. If the area of the parallelogram is 58 $ft^2$, find the height of the parallelogram.




2. Find the Area of the Regular Octagon?

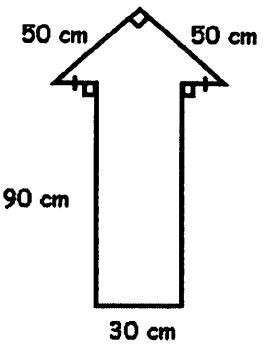



3. A rectangle has dimensions $9\frac{1}{4}$ in. by 13 in. A diagonal of the rectangle forms two matching right triangles. What is the area of one of the triangles?



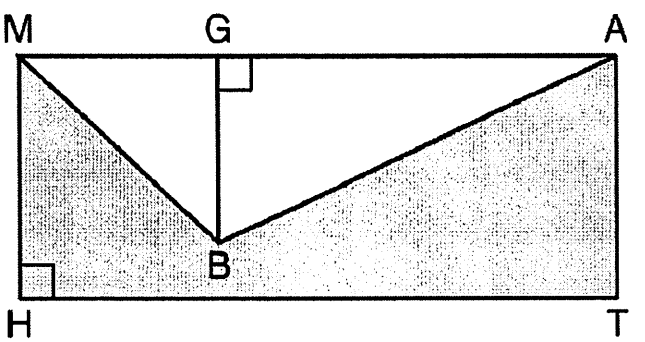
4. Brad is planning a garage sale. To direct customers to his house, he is painting six arrow signs.

a) Calculate the area of one sign.



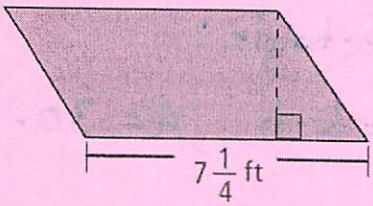

b) Each can of paint can cover 1 $m^2$. How many cans of paint should Brad buy for all six signs. Explain your answer.

5. In the diagram below, *MATH* is a rectangle, *GB* = 4.6, *MH* = 6, and *HT* = 15. What is the area of the polygon *MBATH?*



# Topic 13: Area Quiz Review

1. If the area of the parallelogram is 58 ft², find the height of the parallelogram.



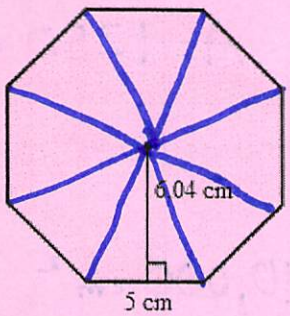

$A \div b = h$

$58 \div 7\frac{1}{4}$

$\frac{58}{1} \div \frac{29}{4}$

$\frac{58}{1} \cdot \frac{4}{29} = \frac{8}{1}$ = height = 8 ft

2. Find the Area of the Regular Octagon?



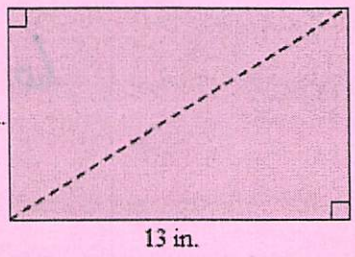

$A = \frac{b \cdot h}{2}$ $A = \frac{5 \cdot 6.04}{2}$

$A = 15.1 \text{ cm}^2$

$\times 8$ Δ's

Area of Regular Octagon = 120.8 cm²

3. A rectangle has dimensions $9\frac{1}{4}$ in. by 13 in. A diagonal of the rectangle forms two matching right triangles. What is the area of one of the triangles?

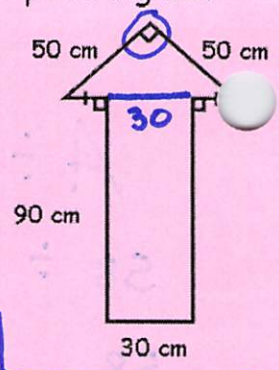



$A = \frac{b \cdot h}{2}$ $A = \frac{\frac{13}{1} \cdot \frac{37}{4}}{2} = \frac{481}{4} = 120\frac{1}{4}$ in²

$120\frac{1}{4} \div 2$

$\frac{481}{4} \cdot \frac{1}{2} = \frac{481}{8}$ = $60\frac{1}{8}$ in²

4. Brad is planning a garage sale. To direct customers to his house, he is painting six arrow signs.




a) Calculate the area of one sign.

Rectangle:

$A = b \cdot h \quad A = 30 \cdot 90$

$A = 2700 \text{ cm}^2$

Triangle

$A = \frac{b \cdot h}{2} \quad A = \frac{50 \cdot 50}{2}$

$A = 1250 \text{ cm}^2$

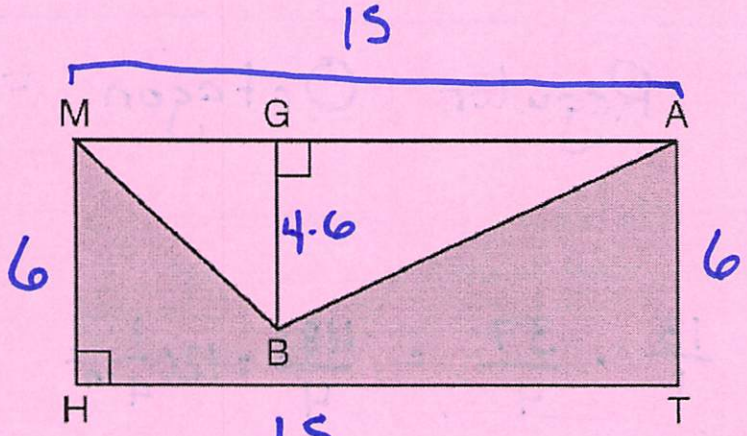
Area of Sign = $3950 \text{ cm}^2$

b) Each can of paint can cover 1 $m^2$. How many cans of paint should Brad buy for all six signs. Explain your answer.

$1 \text{ m}^2 = 10{,}000 \text{ cm}^2$

3 cans

5. In the diagram below, *MATH* is a rectangle, $GB = 4.6$, $MH = 6$, and $HT = 15$. What is the area of the polygon *MBATH*?




Rectangle − Triangle = MBATH

$A = b \cdot h \quad A = \frac{b \cdot h}{2}$

$A = 15 \cdot 6 \quad A = \frac{15 \cdot 4.6}{2}$

$A = 90 \text{ units}^2 \quad A = 34.5 \text{ units}^2$

MBATH = $55.5 \text{ units}^2$