

4.3 Area of Trapezoids

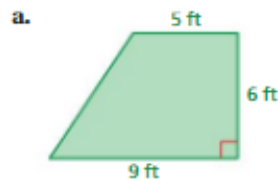
Name _____

I can find the area of trapezoids

Notes:

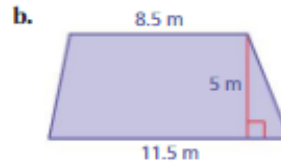
Area of a Trapezoid: $A = \frac{1}{2} h(b_1 + b_2)$

Find the area of each trapezoid.



$$\begin{aligned} A &= \frac{1}{2} h(b_1 + b_2) && \text{Write formula.} \\ &= \frac{1}{2} (6)(5 + 9) && \text{Substitute.} \\ &= \frac{1}{2} (6)(14) && \text{Add.} \\ &= 42 && \text{Multiply.} \end{aligned}$$

❖ The area of the trapezoid is 42 square feet.



$$\begin{aligned} A &= \frac{1}{2} h(b_1 + b_2) \\ &= \frac{1}{2} (5)(8.5 + 11.5) \\ &= \frac{1}{2} (5)(20) \\ &= 50 \end{aligned}$$

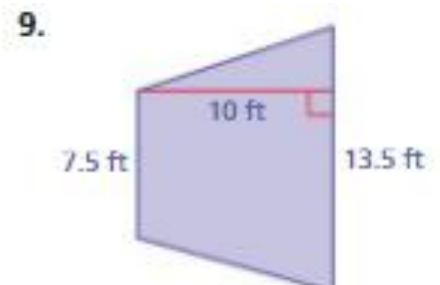
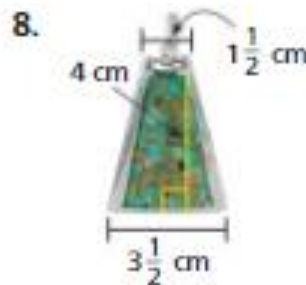
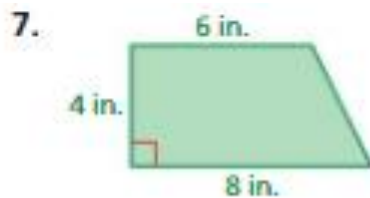
❖ The area of the trapezoid is 50 square meters

Find the area of the trapezoid.

4. $b_1 = 4$, $b_2 = 8$, $h = 2$

5. $b_1 = 5$, $b_2 = 7$, $h = 4$

6. $b_1 = 12$, $b_2 = 6$, $h = 3$



REASONING The rectangle and the trapezoid have the same area. What is the length ℓ of the rectangle?

