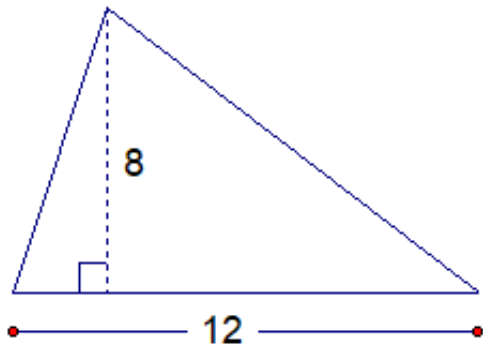


11.2 Area of Triangles, Trapezoids and Rhombi - notes

ex 1 Find the area.

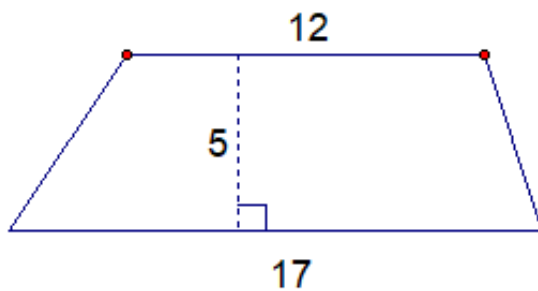


$$A = \frac{1}{2}b \cdot h$$

$$A = \frac{1}{2}(12)(8)$$

$$A = 48 \text{ square units}$$

ex 2 Find the area of this trapezoid.

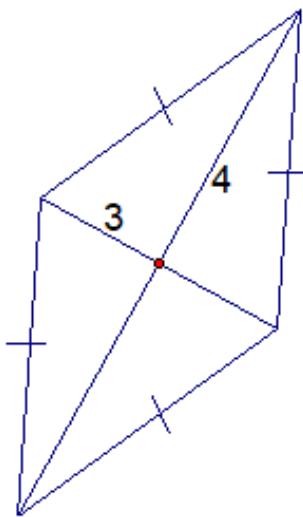


$$A = \frac{1}{2}(b_1 + b_2) \cdot h$$

$$A = \frac{1}{2}(12 + 17)(5)$$

$$A = 72.5 \text{ square units}$$

ex 3 Find the area. Since the four sides are congruent it is a rhombus. The 3 and 4 are parts of each diagonal length. Since it is a parallelogram we know diagonals have been bisected.

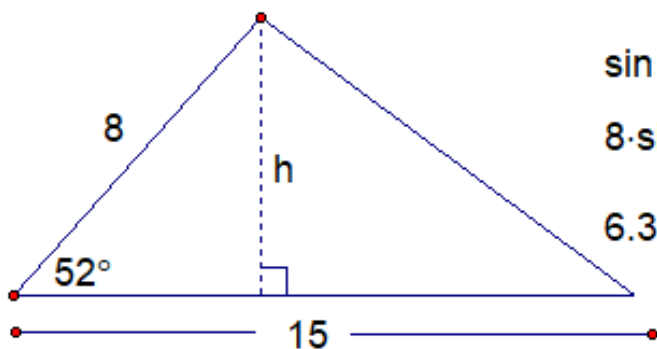


$$A = \frac{1}{2}d_1 \cdot d_2$$

$$A = \frac{1}{2}(6)(8)$$

$$A = 24 \text{ square units}$$

ex 4 Find the area.



$$\sin 52^\circ = \frac{h}{8}$$

$$8 \cdot \sin 52^\circ = h$$

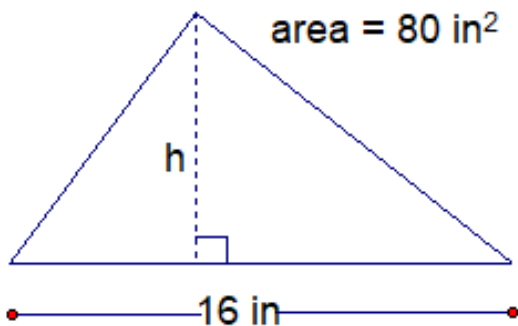
$$6.304086029 = h$$

$$A = \frac{1}{2}b \cdot h$$

$$A = \frac{1}{2}(15)(6.304\dots)$$

$$A \approx 47.28 \text{ square units}$$

ex 5 Find the height.



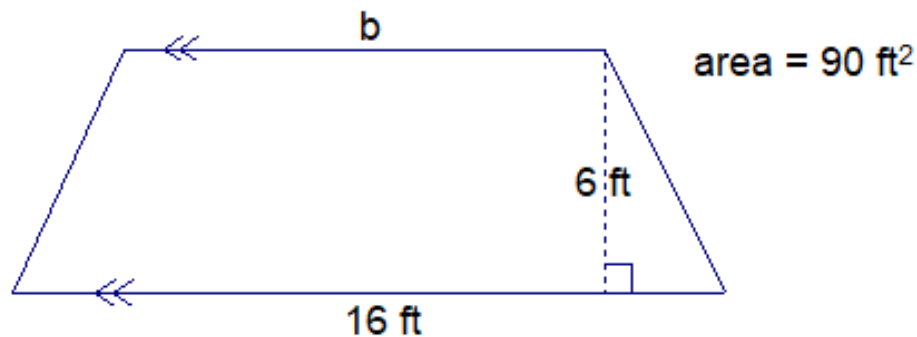
$$A = \frac{1}{2}b \cdot h$$

$$80 = \frac{1}{2}(16)(h)$$

$$160 = 16h$$

$$10 = h$$

ex 6 Find the missing length.



$$A = \frac{1}{2}(b_1 + b_2) \cdot h$$

$$90 = \frac{1}{2}(b + 16)(6)$$

$$180 = (b + 16)(6)$$

$$30 = b + 16$$

$$14 = b$$

