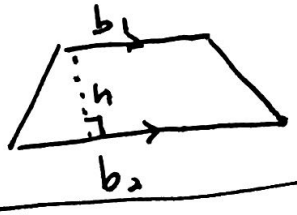
11.2 Area of Trapezoid, Rhombus or Kite

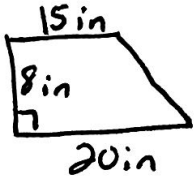
Trapezoid 

Area of Trapezoid (similar to a triangle but two bases)

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



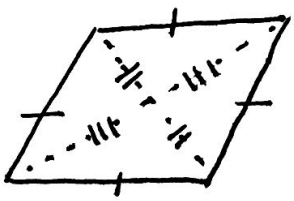
* Bases are the parallel sides
* height is perpendicular to the bases

ex: 

$A = \frac{1}{2}(15+20)(8)$

$= \frac{1}{2}(35)(8) = \boxed{140\ in^2}$

Rhombus
(parallelogram with 4 ≅ sides)

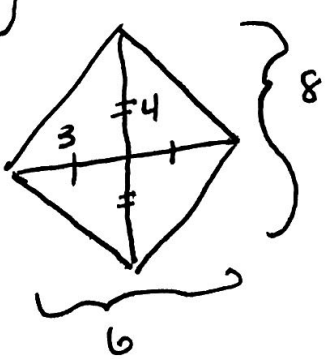


Area of a Rhombus

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

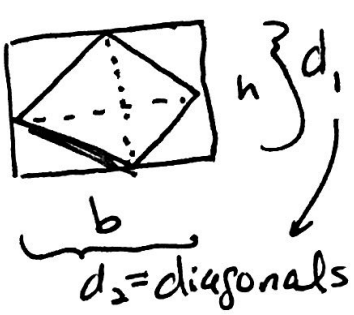
$A = \frac{1}{2}(6)(8)$

$A = 24\ u^2$

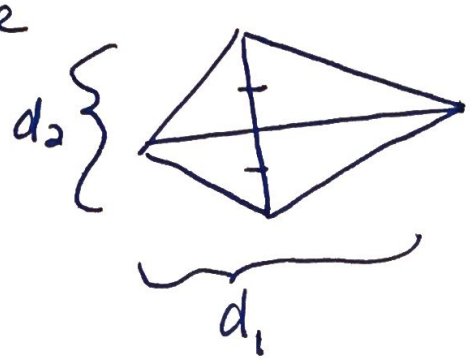


Diagonals bisect each other

Area of a Rhombus is like $\frac{1}{2}$ of a rect. but instead of $\frac{1}{2}bh$ it is $\frac{1}{2}d_1 d_2$



Kite

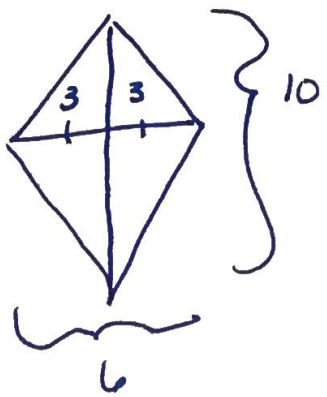


Same formula as a Rhombus

Area of a kite

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

Bonus:
Send a picture of a trapezoid, rhombus or kite.



$$A = \frac{1}{2}(6)(10)$$

$$= 30 \text{ u}^2$$