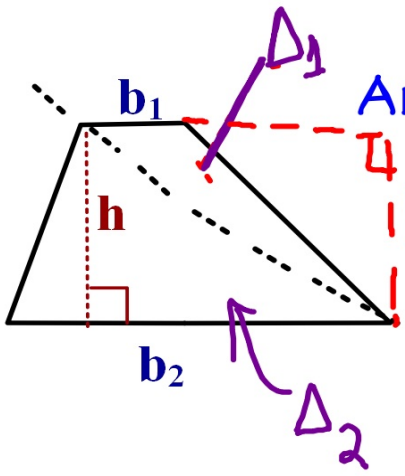
11-3 Trapezoids

March 6

std. 10.0



Area of a trapezoid

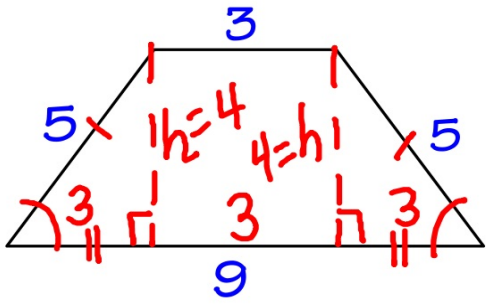
$\Delta_1 = \frac{1}{2} b_1 h$

$+ \Delta_2 = \frac{1}{2} b_2 h$

$trap = \frac{1}{2} b_1 h + \frac{1}{2} b_2 h$

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

1



find area

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

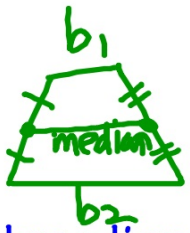
$$\frac{1}{2}(4)(12) = 24\ u^2$$

2

$A = 72$

$h = 9$

$b_1 = 5$



find b_2 and median

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

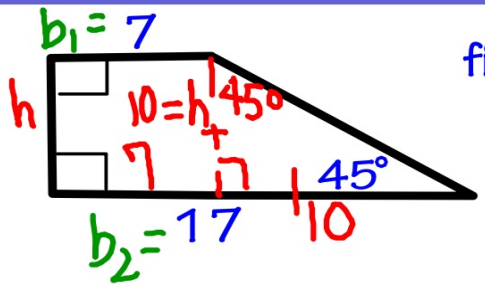
$$2[72] = 2\left[\frac{1}{2}(9)(b_2 + 5)\right]$$

$$144 = 9b_2 + 45$$

$$11 = b_2$$

$$8 = \frac{5+11}{2} = \frac{b_1 + b_2}{2}$$

3



find area

$$A = \frac{1}{2} \cdot 10(7+17)$$

$$\frac{1}{2} \cdot 10(24) = 120$$