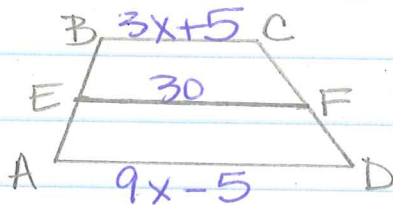


6-6 TRAPEZOIDS

ex: Trapezoid ABCD with median EF and $BC = 3x + 5$, $EF = 30$, $AD = 9x - 5$. Find x.



$$EF = \frac{1}{2}(BC + AD)$$

$$30 = \frac{1}{2}(3x + 5 + 9x - 5)$$

$$30 = \frac{1}{2}(12x)$$

$$BC = 3(5) + 5$$

$$BC = 20$$

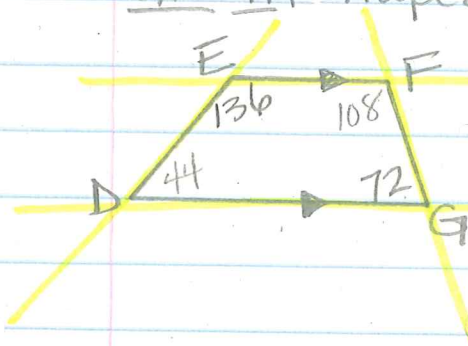
$$AD = 9(5) - 5$$

$$AD = 40$$

$$\frac{30}{6} = \frac{6x}{6}$$

$$x = 5$$

ex: In trapezoid DEFG, find $m\angle D$ & $m\angle F$.



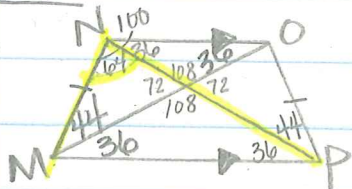
$$m\angle F = 180 - 72$$

$$m\angle F = 108$$

$$m\angle D = 180 - 136$$

$$m\angle D = 44$$

ex: For isos. trapezoid MNOP, find $m\angle MNP$.



$$m\angle MNP = 64$$