Example 1

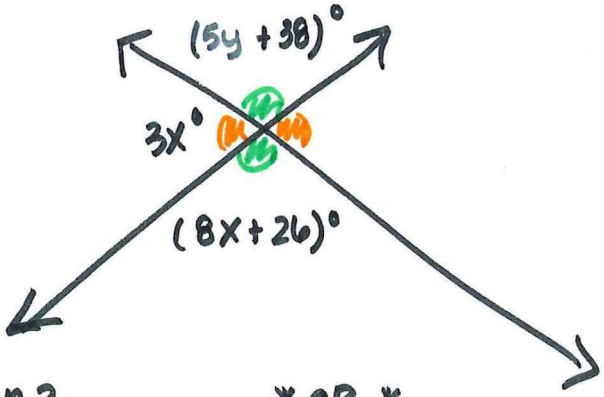
VA

$\angle 1 = \angle 3$

$\angle 2 = \angle 4$

LP

$\angle 3 + \angle 2 = 180°$



Step 1

$\angle 3 + \angle 2 = 180$

$8x + 26 + 3x = 180$

$11x + 26 = 180$

$-26 \quad -26$

$11x = 154$

$\boxed{x = 14}$

Step 2 *** OR ***

$\angle 2 + \angle 4 = 180$

$3(14) + 5y + 38 \; 180$

$42 + 5y + 38 = 180$

$5y + 80 = 180$

$-80 \quad -80$

$5y = 100$

$\boxed{y = 20}$

$\angle 3 = \angle 2$

$5y + 38 = 8(14) + 26$

$5y + 38 = 112 + 26$

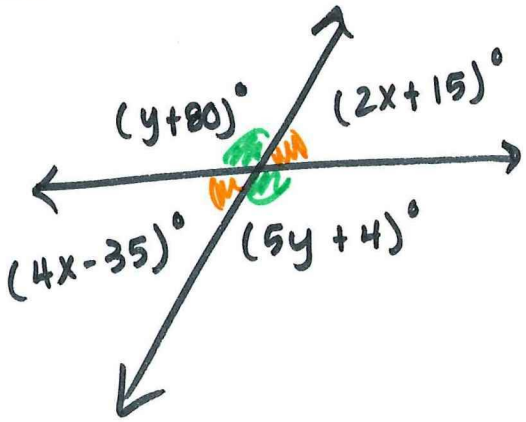
$5y + 38 = 138$

$-38 \quad -38$

$5y = 100$

$\boxed{y = 20}$

Example 2



$\angle 1 = \angle 3$

$4x - 35 = 2x + 15$

$-2x \quad -2x$

$2x - 35 = 15$

$+35 \quad +35$

$2x = 50$

$\boxed{x = 25}$

$\angle 4 = \angle 2$

$5y + 4 = y + 80$

$-y \quad -y$

$4y + 4 = 80$

$-4 \quad -4$

$4y = 76$

$\boxed{y = 19}$