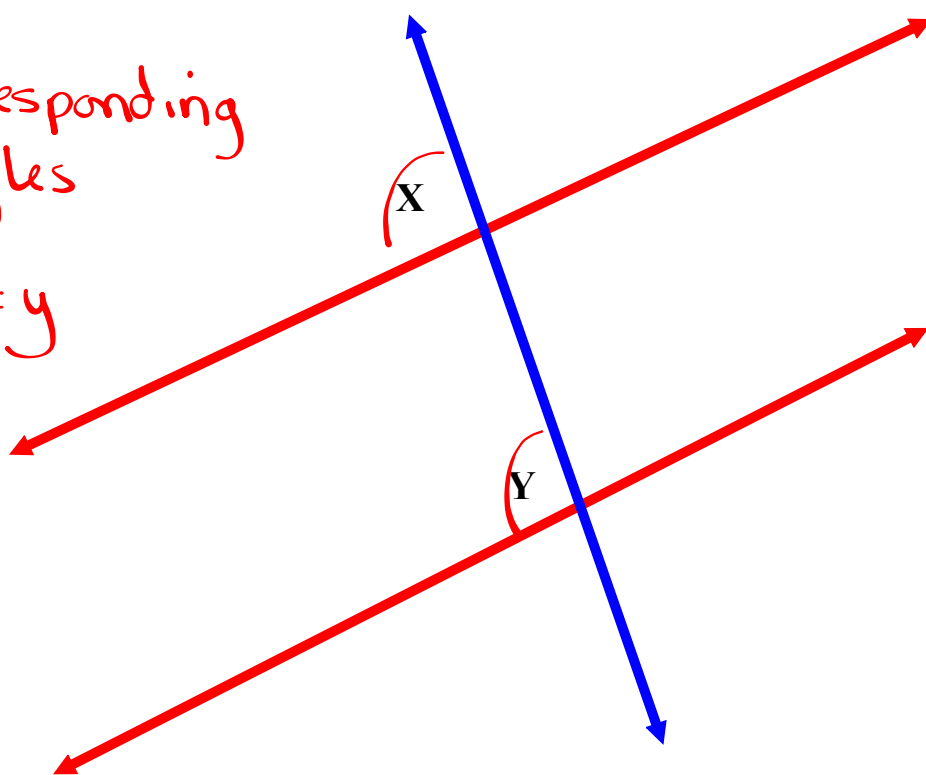


State the Rule

corresponding
angles

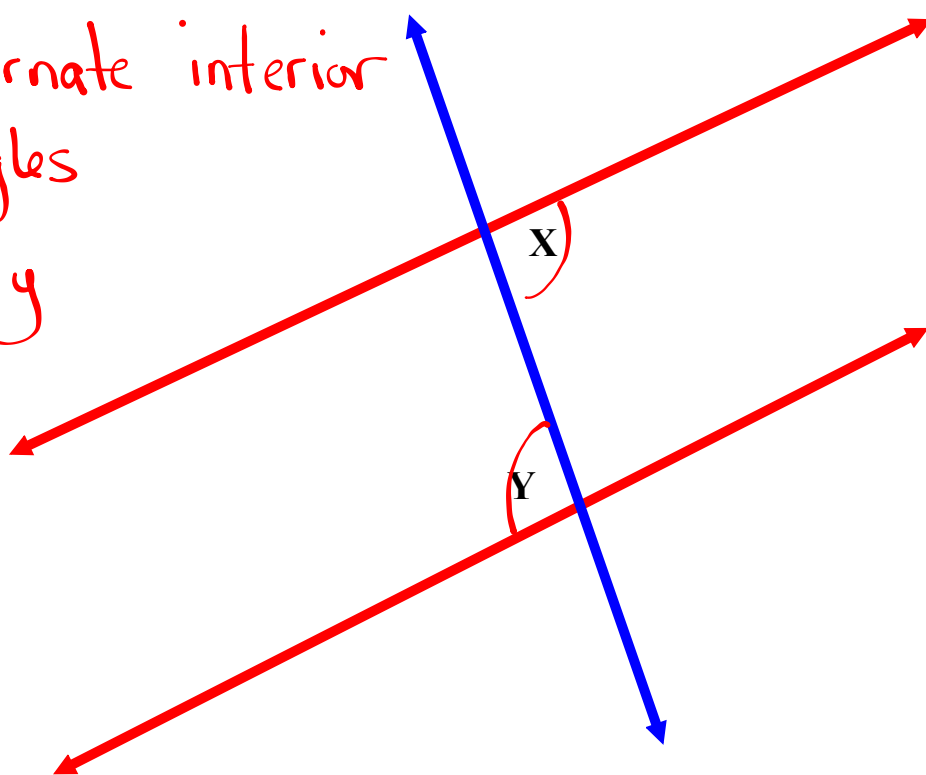
$$x = y$$



State the Rule

alternate interior
angles

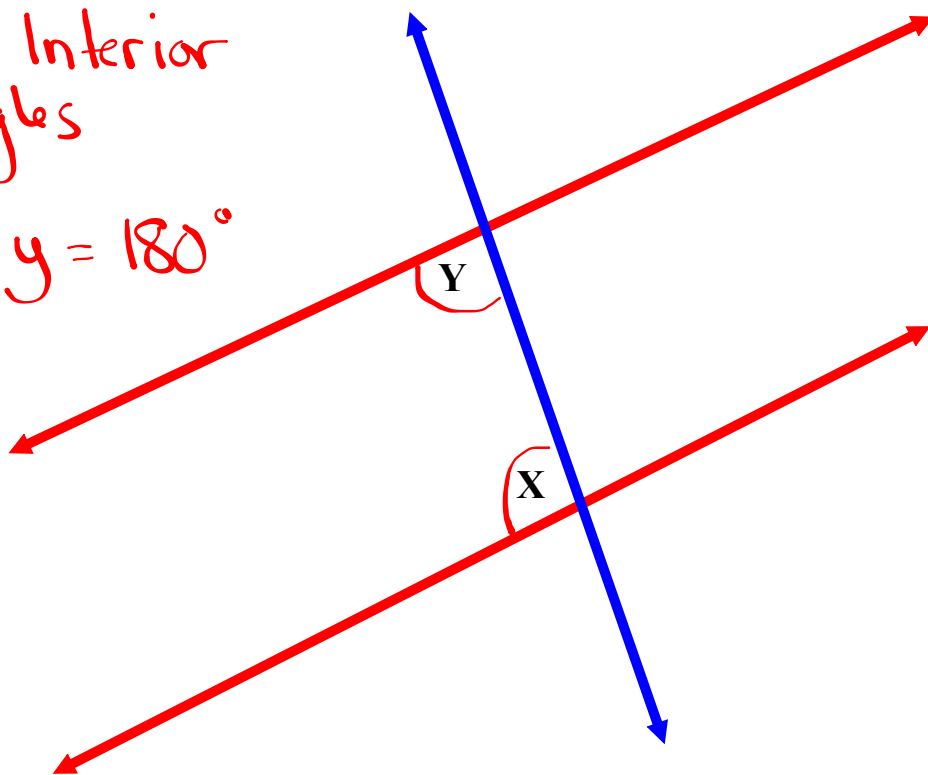
$$x = y$$



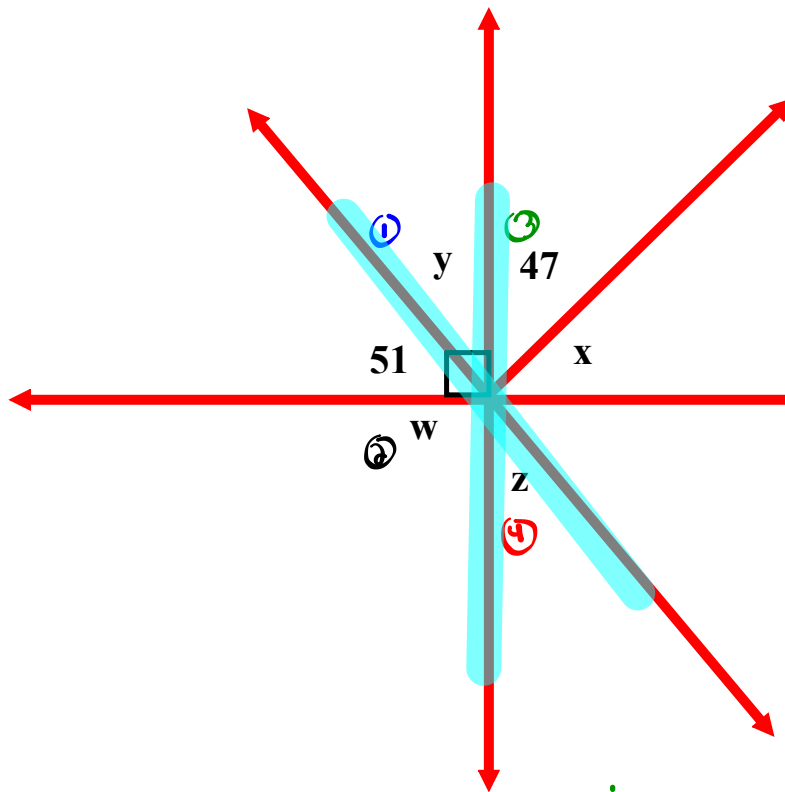
State the Rule

Co-Interior
angles

$$x + y = 180^\circ$$



Solve for the missing angles



$$y + 51^\circ = 90^\circ$$

$$y = 90^\circ - 51^\circ$$

$$y = 39^\circ$$

$$w = 90^\circ$$

$$x + 47^\circ = 90^\circ$$

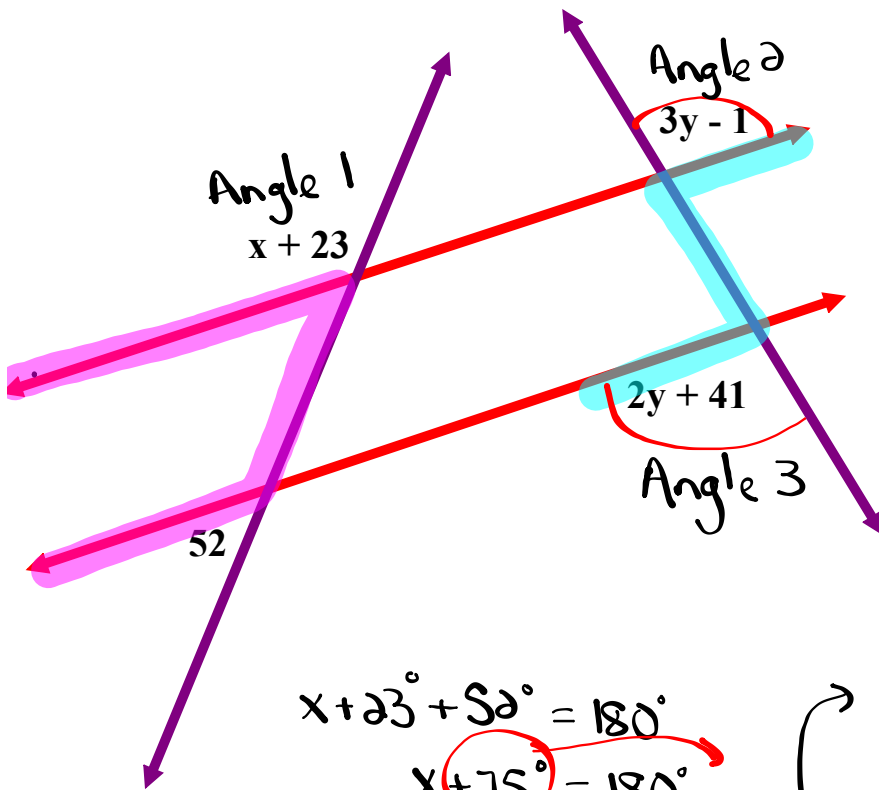
$$x = 90^\circ - 47^\circ$$

$$x = 43^\circ$$

$$z = y$$

$$z = 39^\circ$$

Solve for x & y and find the indicated angles!



$$\begin{aligned}
 x + 23^\circ + 52^\circ &= 180^\circ \\
 x + 75^\circ &= 180^\circ \\
 x &= 180^\circ - 75^\circ \\
 x &= \underline{105^\circ}
 \end{aligned}$$

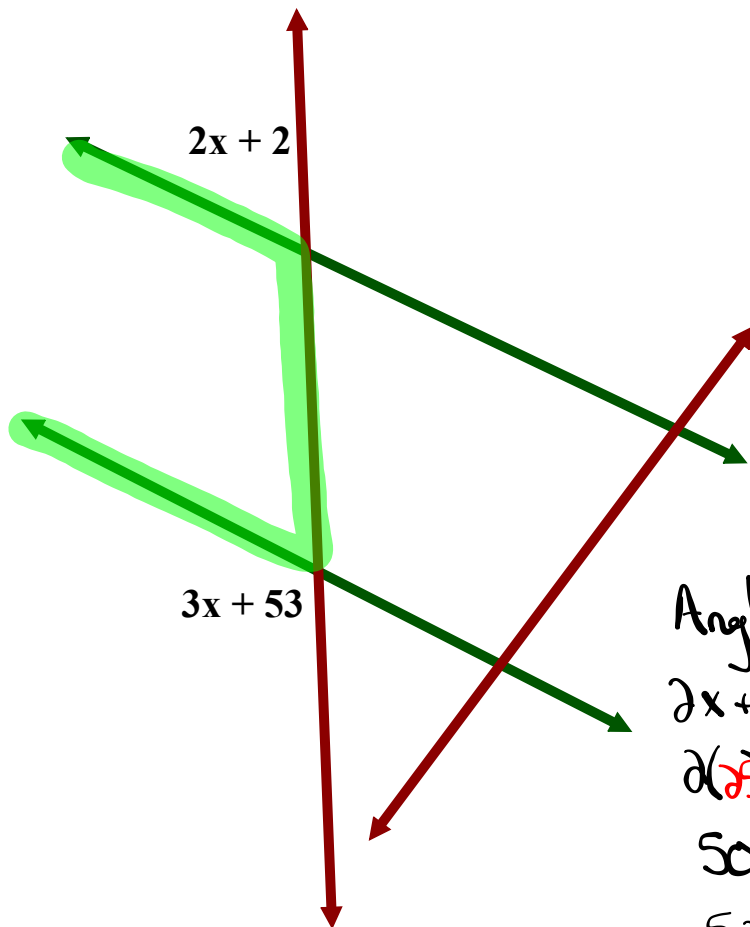
$$\begin{aligned}
 &\underline{\text{Angle 1}} \\
 &\underline{x + 23^\circ} \\
 &105^\circ + 23^\circ \\
 &128^\circ
 \end{aligned}$$

$$\begin{aligned}
 3y - 1^\circ &= 2y + 41^\circ \\
 3y - 2y &= 41^\circ + 1^\circ \\
 y &= \underline{42^\circ}
 \end{aligned}$$

$$\begin{aligned}
 &\underline{\text{Angle 2}} \\
 &\underline{3y - 1} \\
 &3(42) - 1^\circ \\
 &126 - 1^\circ \\
 &125^\circ
 \end{aligned}$$

$$\begin{aligned}
 &\text{Angle 3} \\
 &\underline{2y + 41^\circ} \\
 &2(42) + 41^\circ \\
 &84 + 41^\circ \\
 &125^\circ
 \end{aligned}$$

Solve for x and then find the indicated angles



$$\underline{2x + 2} + \underline{3x + 53} = 180$$

$$5x + 55 = 180$$

$$5x = 180 - 55$$

$$\frac{5x}{5} = \frac{125}{5}$$

$$x = 25$$

Angle 1

$$2x + 2$$

$$2(25) + 2$$

$$50 + 2$$

$$52$$

Angle 2

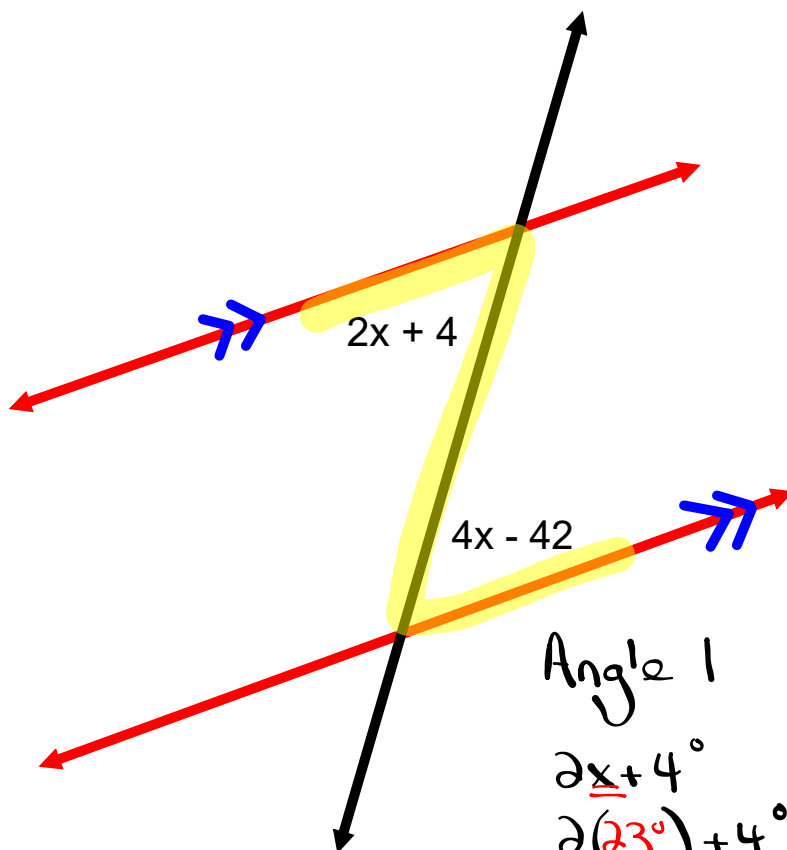
$$3x + 53$$

$$3(25) + 53$$

$$75 + 53$$

$$128$$

Solve for x and then find the indicated angles



$$2x + 4 = 4x - 42$$

$$2x - 4x = -42 - 4$$

$$\frac{-2x}{-2} = \frac{-46}{-2}$$

$$x = \underline{\underline{23}}$$

Angle 1

$$\begin{aligned} & 2x + 4^\circ \\ & 2(23^\circ) + 4^\circ \\ & 46^\circ + 4^\circ \\ & 50^\circ \end{aligned}$$

Angle 2

$$\begin{aligned} & 4x - 42^\circ \\ & 4(23^\circ) - 42^\circ \\ & 92^\circ - 42^\circ \\ & 50^\circ \end{aligned}$$

Homework
Finish Worksheet

#1. $x + 54 = 2x - 46$

$x - 2x = -46 - 54$

$\frac{-1x}{-1} = \frac{-100}{-1}$

$x = 100$

Angle #1

$x + 54$
 $100 + 54$
 $= 154^\circ$

Angle #2

$2x - 46$
 $2(100) - 46$
 $200 - 46$
 $= 154^\circ$

$$\#2. \quad \boxed{5x+4} + \boxed{2x-34} = 180$$

$$7x - 30 = 180 + 30$$

$$\frac{7x}{7} = \frac{210}{7}$$

$$x = 30$$

Angle #1

$$5x + 4$$

$$5(30) + 4$$

$$150 + 4$$

$$= 154^\circ$$

Angle #2

$$2x - 34$$

$$2(30) - 34$$

$$60 - 34$$

$$= 26^\circ$$

#3. $4x + 20 = 2x + 70$

$$4x - 2x = 70 - 20$$

$$\frac{2x}{2} = \frac{50}{2}$$

$$x = 25^\circ$$

Angle #1

$$4x + 20$$

$$4(25) + 20$$

$$100 + 20$$

$$= 120^\circ$$

Angle #2

$$2x + 70$$

$$2(25) + 70$$

$$50 + 70$$

$$= 120^\circ$$

#4. $5x - 2 = 3x + 54$

$$5x - 3x = 54 + 2$$

$$\frac{2x}{2} = \frac{56}{2}$$

$$x = 28^\circ$$

Angle #1

$$5x - 2$$

$$5(28) - 2$$

$$140 - 2$$

$$= 138^\circ$$

Angle #2

$$3x + 54$$

$$3(28) + 54$$

$$84 + 54$$

$$= 138^\circ$$

$$\begin{aligned} \#5. \quad & \underline{7x+45} + \underline{6x-60} = 180^\circ \\ & 13x \overset{(-15)}{\quad} = 180 + 15 \\ & \frac{13x}{13} = \frac{195}{13} \\ & x = 15 \end{aligned}$$

Angle #1

$$\begin{aligned} & 7x + 45 \\ & 7(15) + 45 \\ & 105 + 45 \\ & = \underline{150^\circ} \end{aligned}$$

Angle #2

$$\begin{aligned} & 6x - 60 \\ & 6(15) - 60 \\ & 90 - 60 \\ & = \underline{30^\circ} \end{aligned}$$

$$\#6. \quad 2x+8 = 50 - 8$$

$$\frac{2x}{2} = \frac{42}{2}$$

$$x = 21^\circ$$

Angle

$$2x + 8$$

$$2(21) + 8$$

$$42 + 8$$

$$= 50^\circ$$

$$\#7. \quad 3x+42 + 3x+42 = 180$$

$$6x + 84 = 180 - 84$$

$$\frac{6x}{6} = \frac{96}{6}$$

$$x = 16^\circ$$

Angle #1 = 2

$$3x + 42$$

$$3(16) + 42$$

$$48 + 42$$

$$= 90^\circ$$

#8. $6x - 4 = 4x + 16 + 4$

$$6x - 4x = 20$$
$$\frac{2x}{2} = \frac{20}{2}$$
$$x = 10$$

Angle #1

$$6x - 4$$
$$6(10) - 4$$
$$60 - 4$$
$$= 56^\circ$$

Angle #2

$$4x + 16$$
$$4(10) + 16$$
$$40 + 16$$
$$= 56^\circ$$

