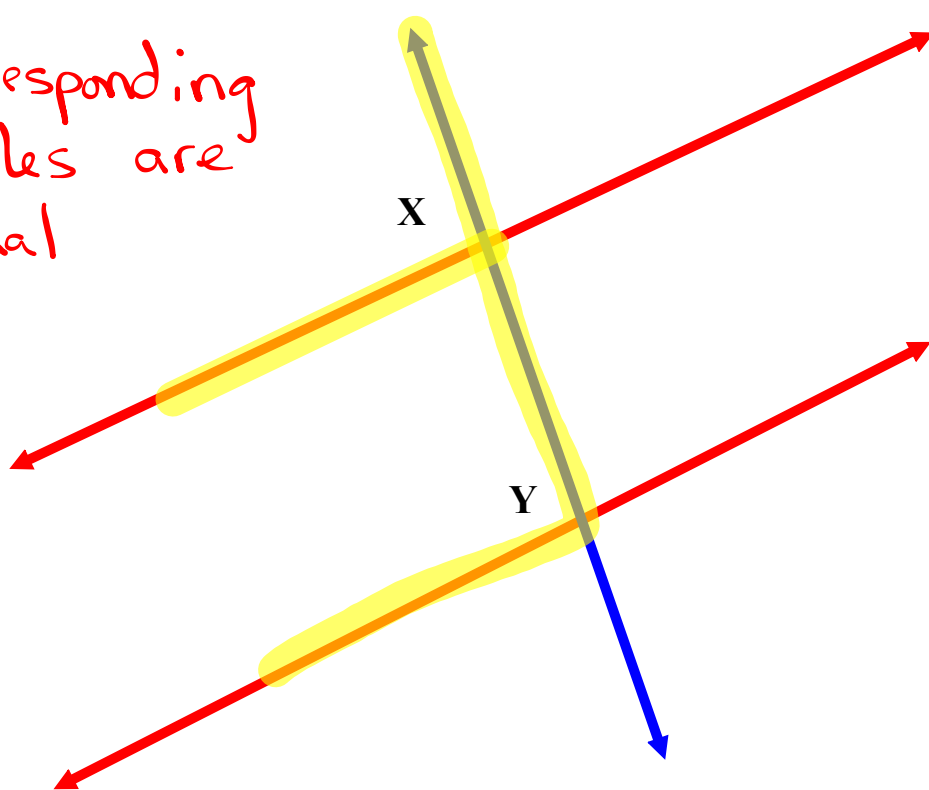


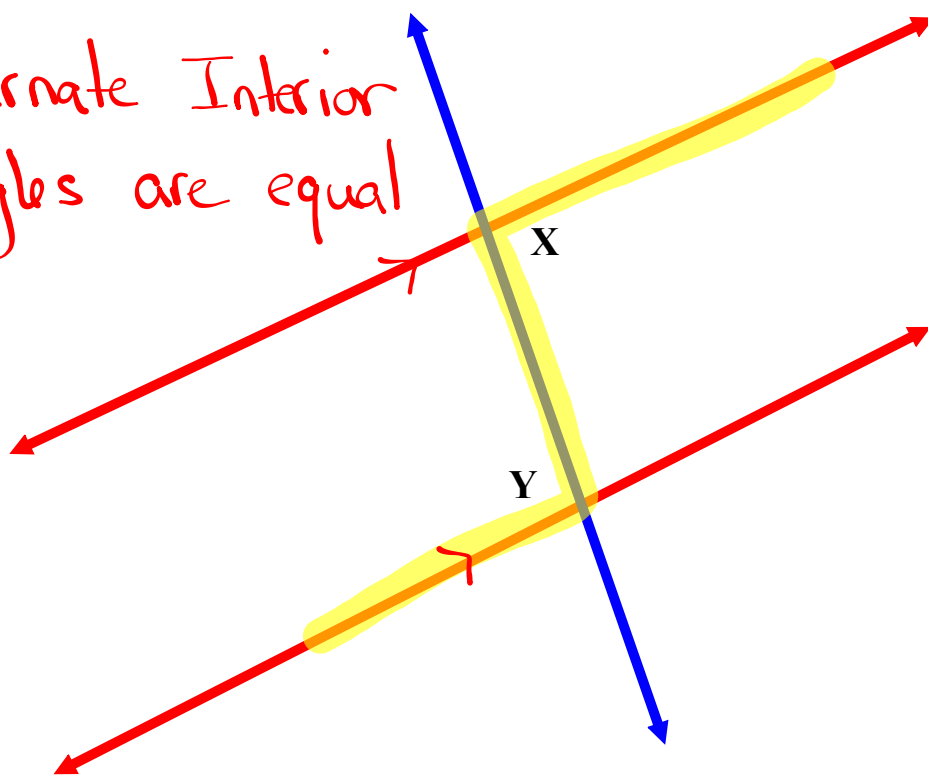
State the Rule

Corresponding
Angles are
equal



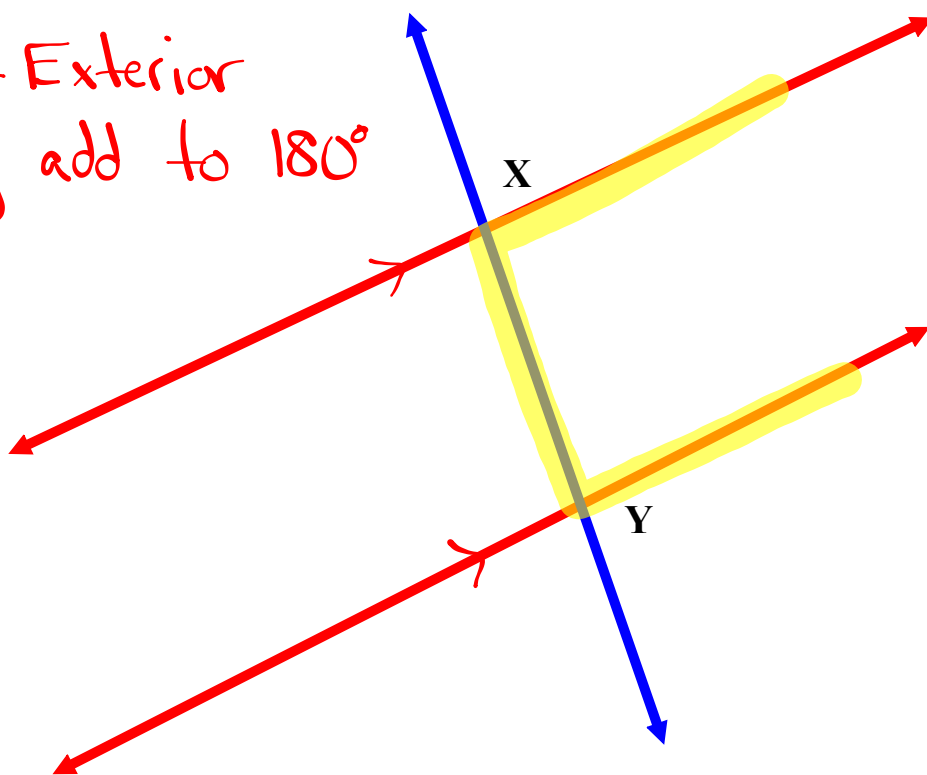
State the Rule

Alternate Interior
Angles are equal



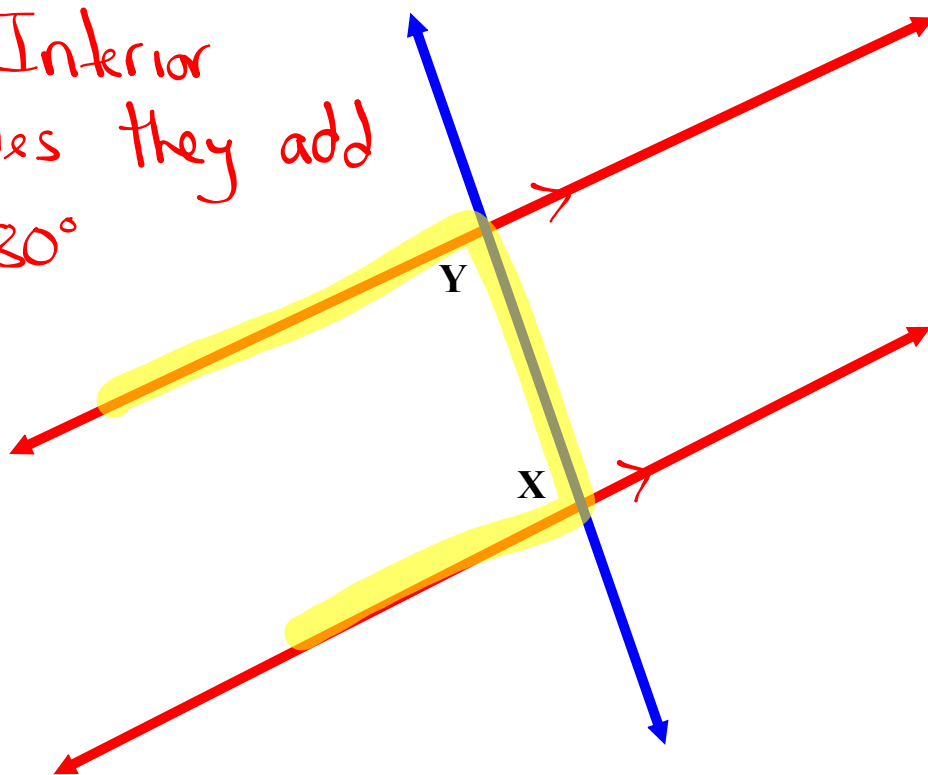
State the Rule

Co-Exterior
they add to 180°

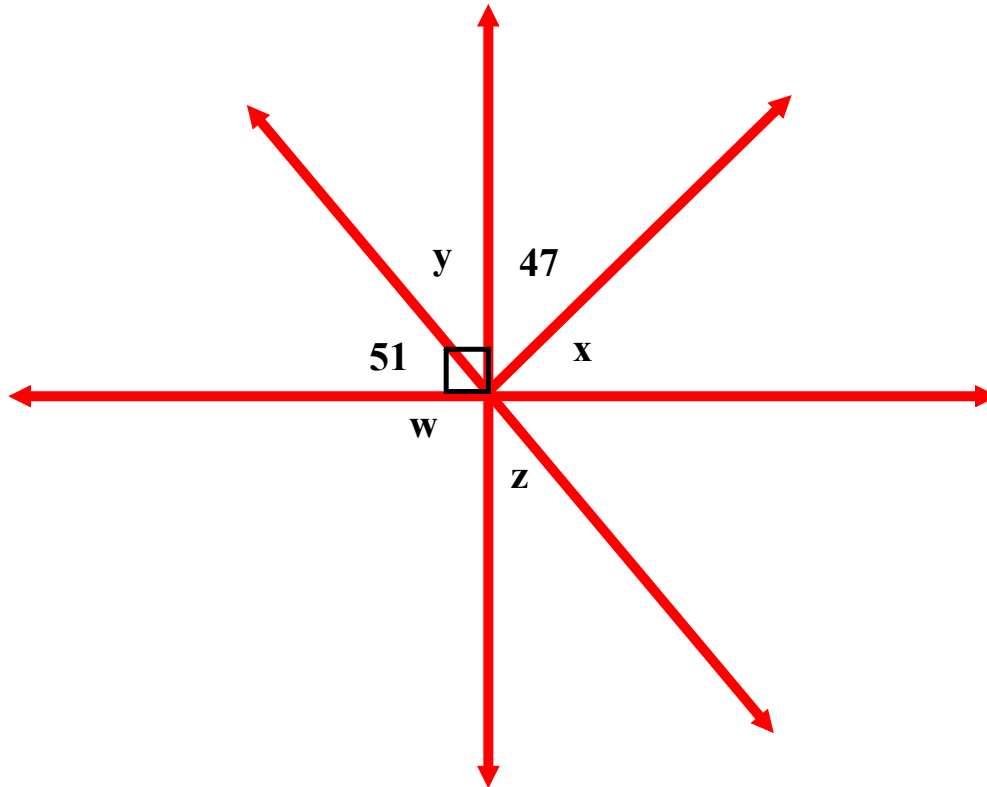


State the Rule

Co-Interior
Angles they add
to 180°



Solve for the missing angles



$$(i) \quad y + 51 = 90$$

$$y = 90 - 51$$

$$\underline{\underline{y = 39^\circ}}$$

$$(ii) \quad z = y$$

$$\underline{\underline{z = 39^\circ}}$$

$$(iii) \quad x + 47 = 90$$

$$x = 90 - 47$$

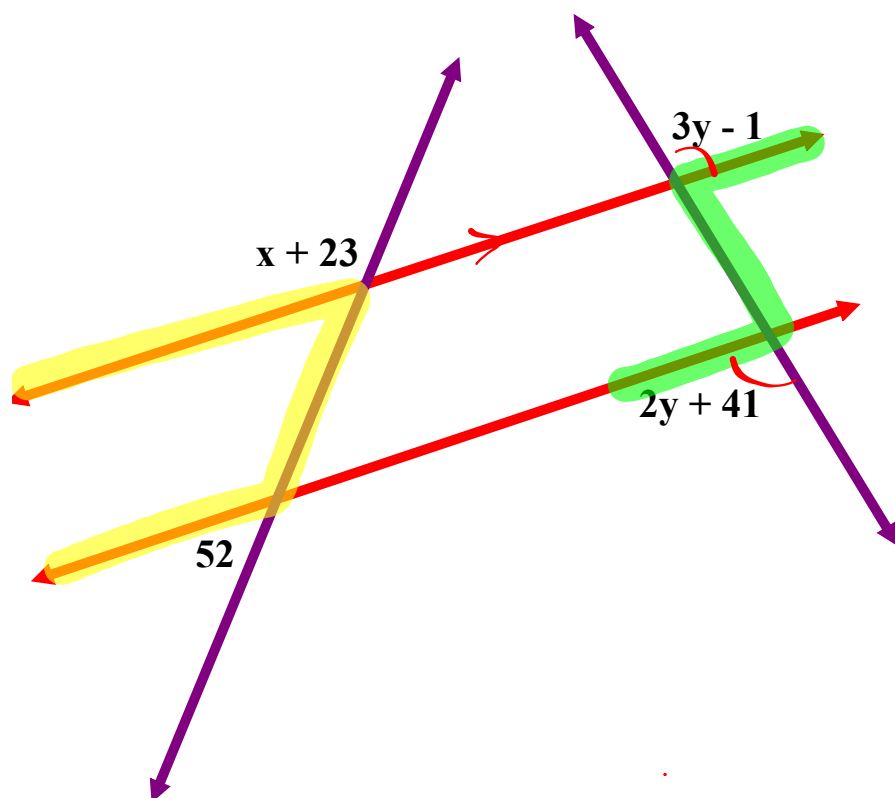
$$\underline{\underline{x = 43^\circ}}$$

$$w + 90 = 180$$

$$w = 180 - 90$$

$$\underline{\underline{w = 90^\circ}}$$

Solve for x & y



Solve for x:

$$x + \underline{23} + \underline{52} = 180^\circ$$

$$x + \underline{75} = 180^\circ$$

$$x = 180 - 75$$

$$x = 105^\circ$$

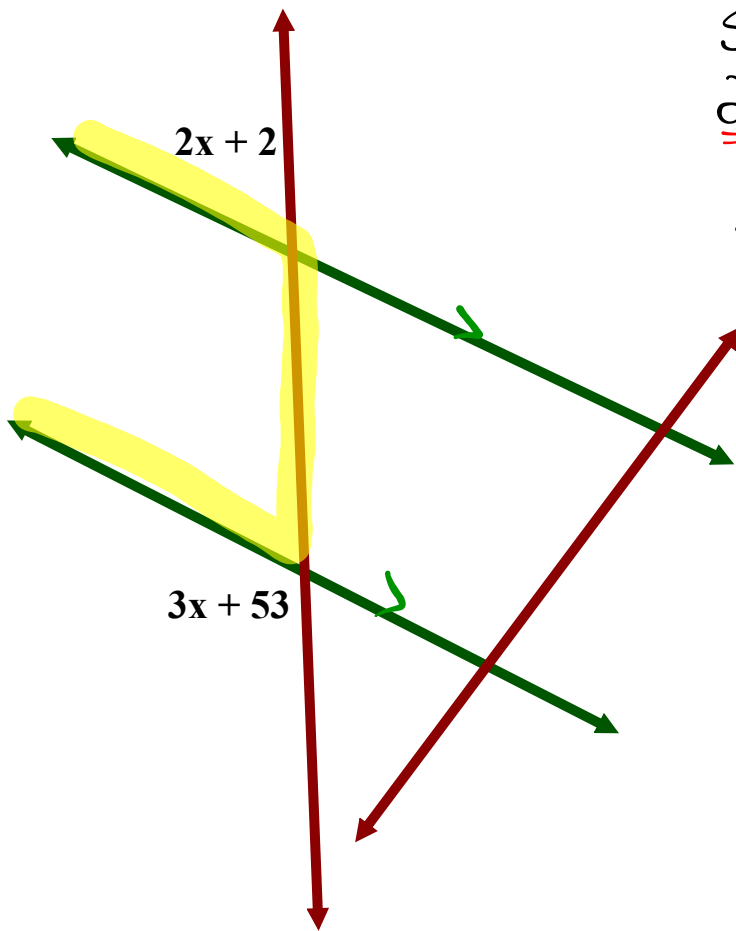
Solve for y:

$$3y - \underline{1} = \underline{2y} + 41$$

$$3y - 2y = 41 + 1$$

$$y = 42^\circ$$

Solve for x and then find the indicated angles



Solve for x:

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

$$\underline{5x} + 55 = 180$$

$$5x = 180 - 55$$

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

$$x = 25$$

Angle # 1

$$2\underline{x} + 2$$

$$2(\underline{25}) + 2$$

$$50 + 2$$

$$52^\circ$$

Angle # 2

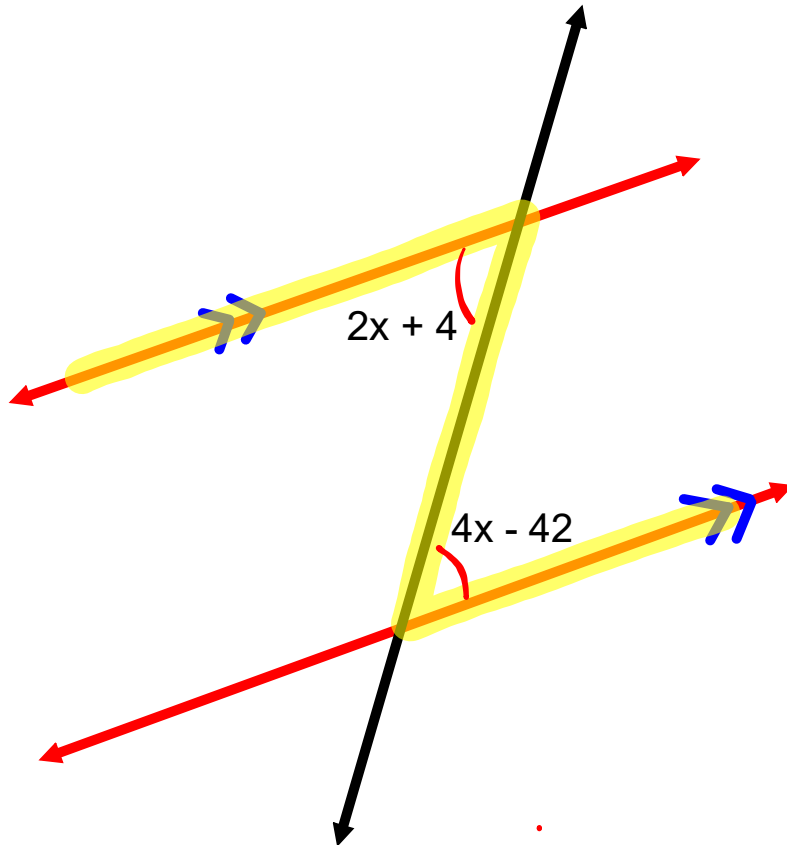
$$3\underline{x} + 53$$

$$3(\underline{25}) + 53$$

$$75 + 53$$

$$128^\circ$$

Solve for x and then find the indicated angles



Solve for x:

$$\underline{2x} + 4 = 4x - \underline{42}$$

$$4 + \underline{42} = 4x - \underline{2x}$$

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

$$23 = x$$

Angle 1

$$\underline{2x} + 4$$

$$2(\underline{23}) + 4$$

$$46 + 4$$

$$50^\circ$$

Angle 2

$$4\underline{x} - 42$$

$$4(\underline{23}) - 42$$

$$92 - 42$$

$$50^\circ$$

Homework
Finish Worksheet

Name: Answer Key

Equations and Transversals

Each figure consists of two parallel lines and a transversal. Find the values of x and y.

1. $x = 26^\circ$

(Co-Interior)
 ① $2x + 128 = 180^\circ$
 $2x = 180 - 128$
 $\frac{2x}{2} = \frac{52}{2}$
 $x = 26^\circ$

2. $x = 54^\circ$

(Alternate Exterior)
 ② $(x+16)^\circ = 70^\circ$
 $x + 16 = 70^\circ$
 $x = 70 - 16$
 $x = 54^\circ$

3. $x = 28^\circ$

$y = 112^\circ$

4. $x = 108^\circ$

$y = 22.2^\circ$

(Supplementary)
 ④ $x + 72^\circ = 180^\circ$
 $x = 108^\circ$

3. $x = \underline{28^\circ}$
 $y = \underline{112^\circ}$

(Alternate Interior)
 ③ $y = 112^\circ$

(Corresponding)
 $4x = 112^\circ$
 $\frac{4x}{4} = \frac{112}{4}$
 $x = \underline{28^\circ}$

5. $x = \underline{12.5^\circ}$
 $y = \underline{200^\circ}$

④ (Alternate Exterior)
 $\frac{1}{2}y = 110^\circ$
 $y = 110^\circ \times 2$
 $y = \underline{200^\circ}$

(Supplementary)
 $4x + 20 + \frac{1}{2}y = 180$
 $4x + 20 + \frac{1}{2}(200^\circ) = 180$
 $4x + 20 + 110 = 180$
 $4x = 50$
 $x = \underline{12.5^\circ}$

4. $x = \underline{108^\circ}$
 $y = \underline{22.2^\circ}$

(Supplementary)
 ④ $x + 72^\circ = 180^\circ$
 $x = \underline{108^\circ}$

(Corresponding)
 $5y - 3 = x$
 $5y - 3 = 108$
 $5y = 111$
 $y = \underline{22.2^\circ}$

6. $x = \underline{18^\circ}$
 $y = \underline{106^\circ}$

⑤ (Co-Interior)
 $6x + 7 + 65 = 180$
 $6x + 72 = 180$
 $6x = 180 - 72$
 $6x = 108$
 $x = \underline{18^\circ}$

(Supplementary)
 $y + 9 + 65 = 180^\circ$
 $y + 74 = 180$
 $y = \underline{106^\circ}$

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