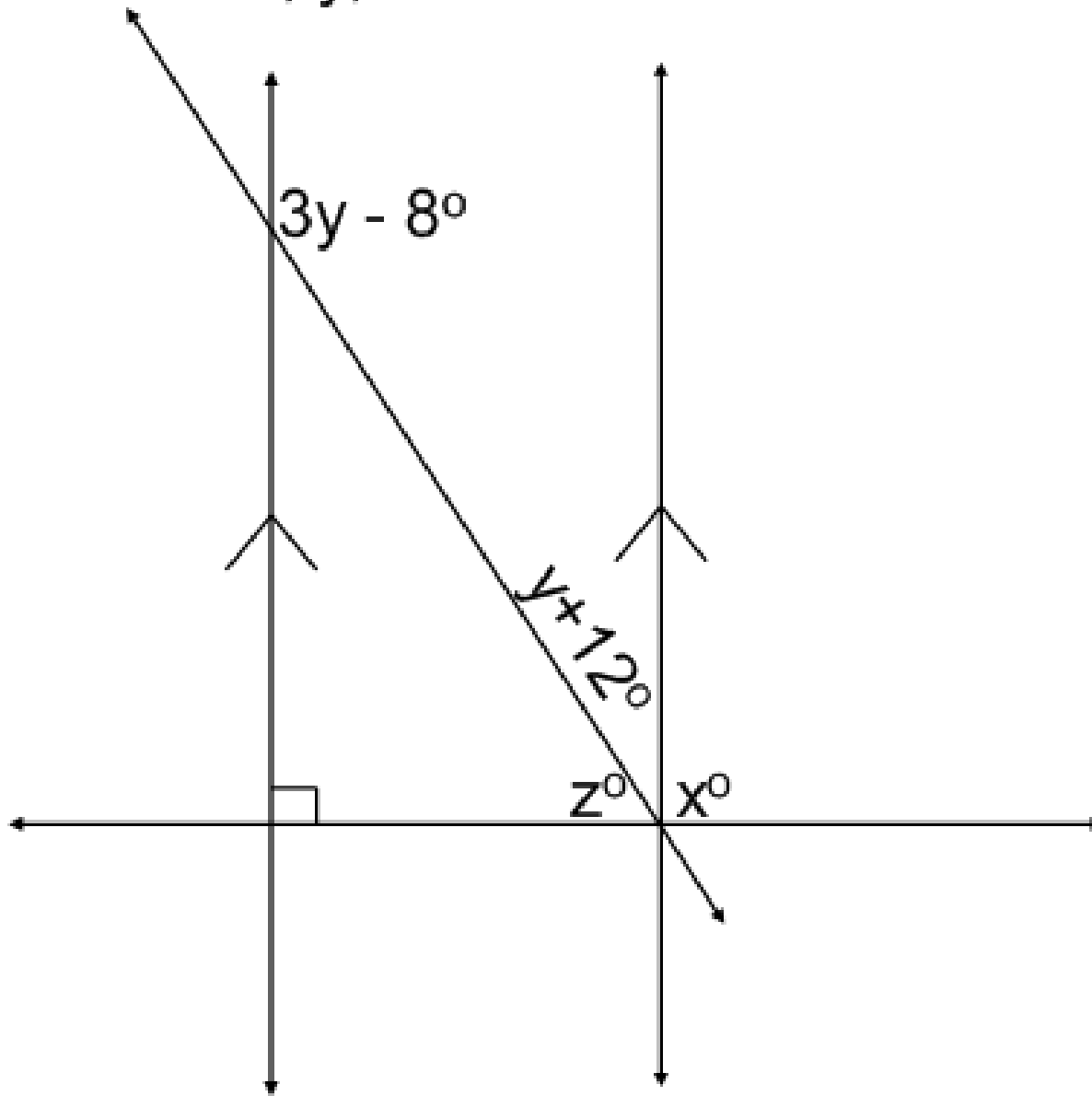
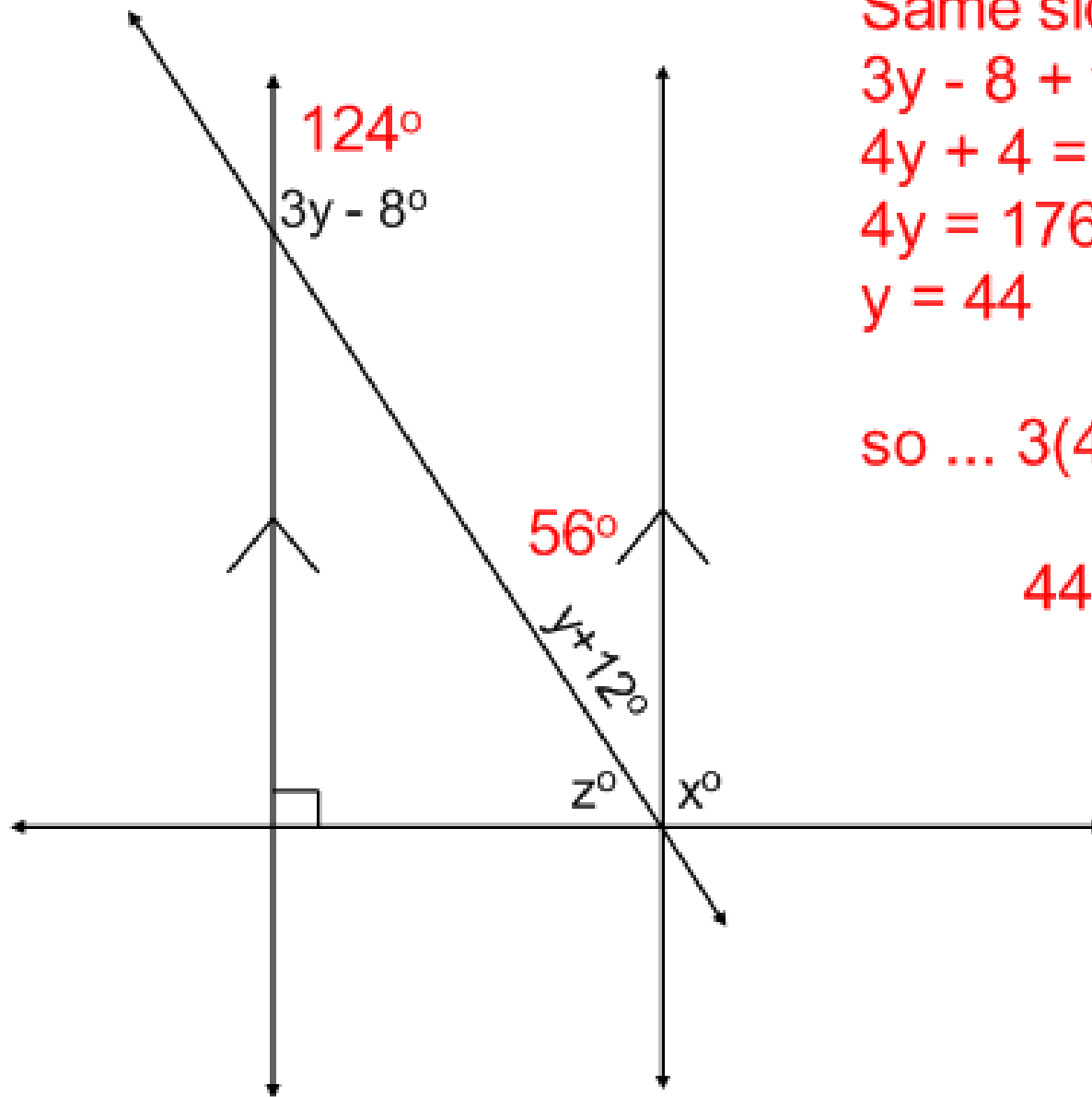


#1: Solve for x , y , and z .



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Same side interior angles:

$$3y - 8 + y + 12 = 180$$

$$4y + 4 = 180$$

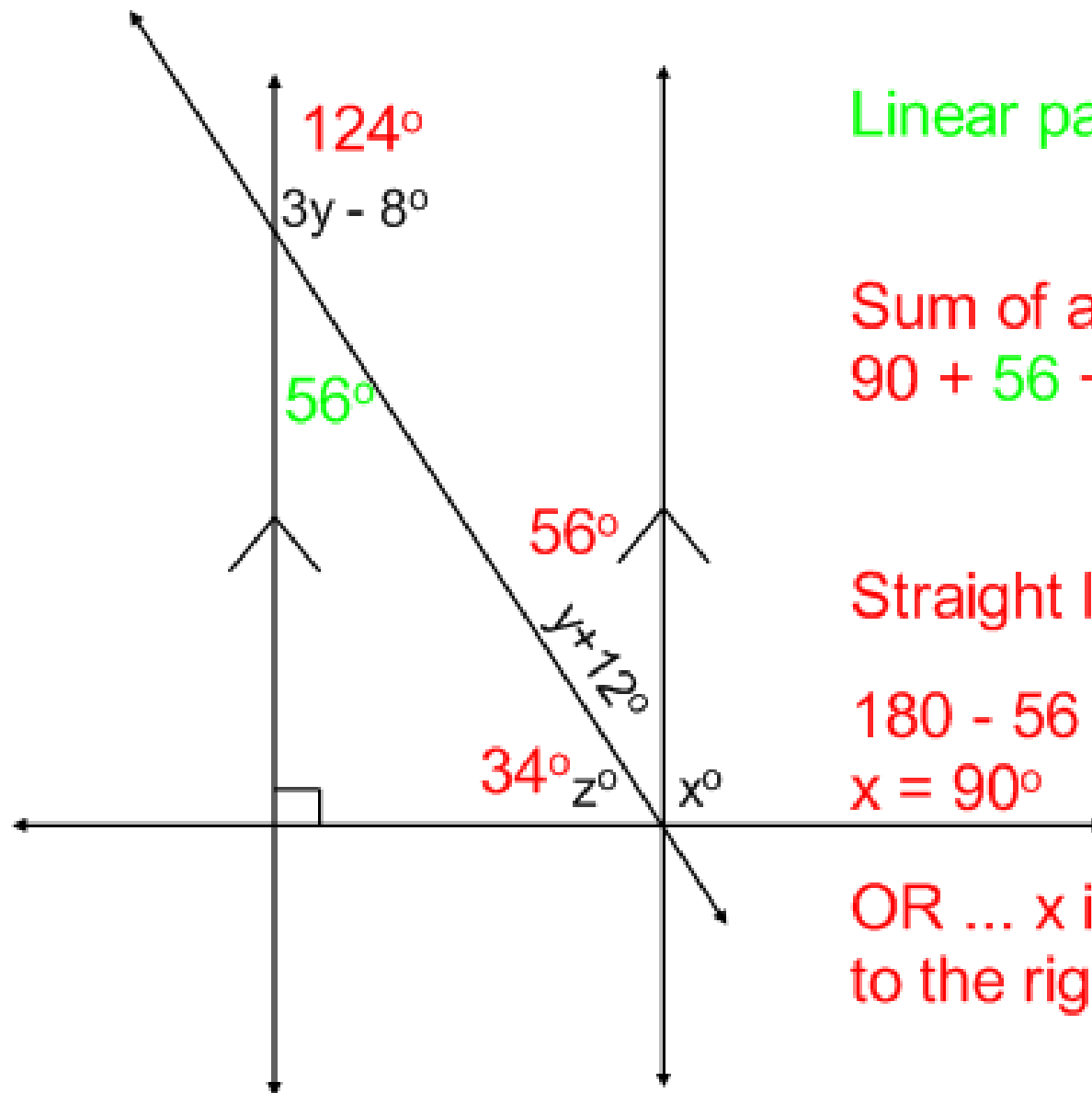
$$4y = 176$$

$$y = 44$$

$$\text{so ... } 3(44) - 8 = 124$$

$$44 + 12 = 56$$

#1: Solve for x, y, and z.



Linear pair to get 56°

$$\begin{aligned}\text{Sum of a } \triangle &= 180^\circ \\ 90 + 56 + z &= 180 \\ z &= 34^\circ\end{aligned}$$

Straight line = 180°

$$\begin{aligned}180 - 56 - 34 &= x \\ x &= 90^\circ\end{aligned}$$

OR ... x is corresponding to the right angle.

#2: Given line $a \parallel$ line b , find:

a) the value of x .

Reason: _____

b) $m\angle 1$

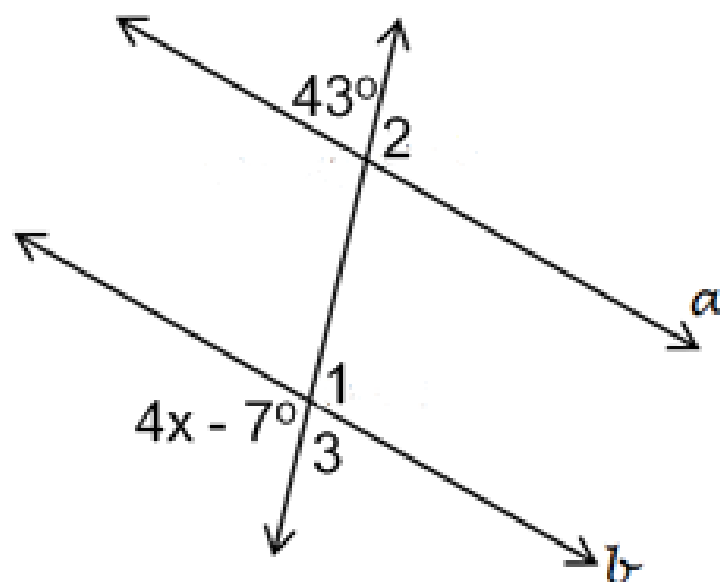
Reason: _____

c) $m\angle 2$

Reason: _____

d) $m\angle 3$

Reason: _____



#2: Given line $a \parallel$ line b , find:

a) the value of x . **=36**

Reason: **Same side exterior = 180**

b) $m\angle 1$

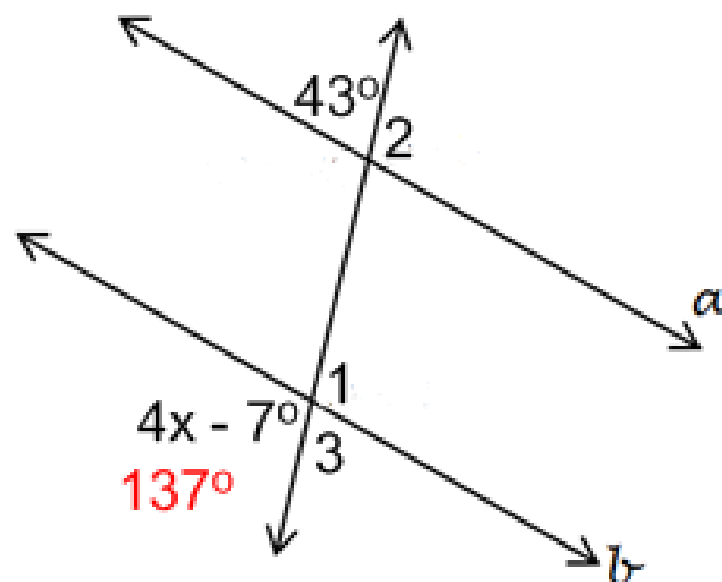
Reason: _____

c) $m\angle 2$

Reason: _____

d) $m\angle 3$

Reason: _____



$$43 + 4x - 7 = 180$$

$$4x + 36 = 180$$

$$4x = 144$$

$$x = 36$$

$$4(36) - 7 = 137$$

#2: Given line $a \parallel$ line b ; find:

a) the value of x . **=36**

Reason: **Same side exterior = 180**

b) $m\angle 1$

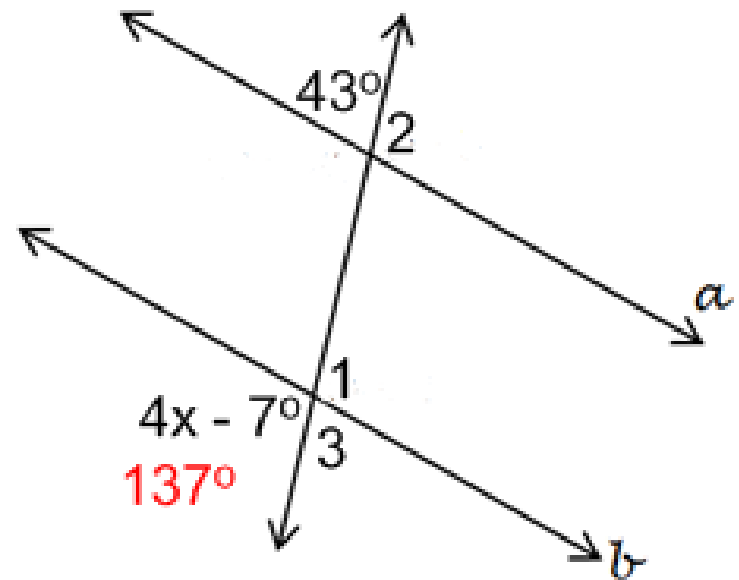
Reason: **137° Vertical angles**

c) $m\angle 2$

Reason: _____

d) $m\angle 3$

Reason: _____



#2: Given line $a \parallel$ line b , find:

a) the value of x . **=36**

Reason: **Same side exterior = 180**

b) $m\angle 1$

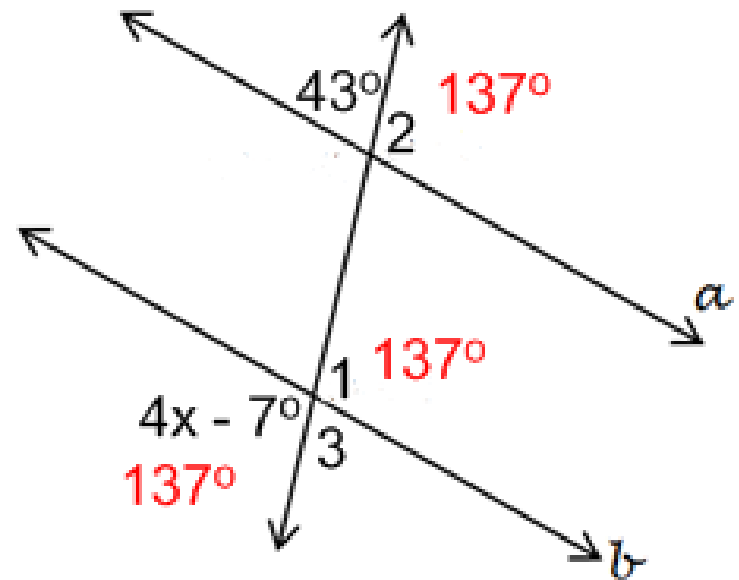
Reason: **137° Vertical angles**

c) $m\angle 2$

Reason: **137° Corresponding angles**

d) $m\angle 3$

Reason: _____



#2: Given line $a \parallel$ line b , find:

a) the value of x . $=36$

Reason: 137° Same side exterior = 180

b) $m\angle 1$

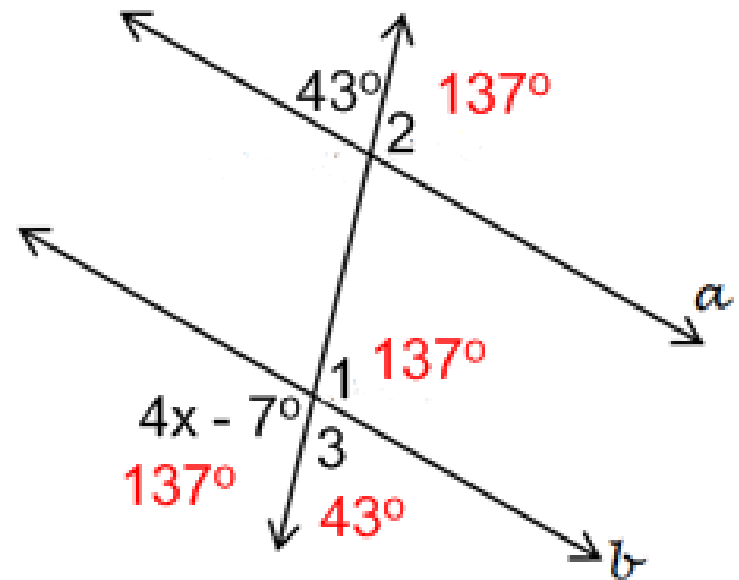
Reason: 137° Vertical angles

c) $m\angle 2$

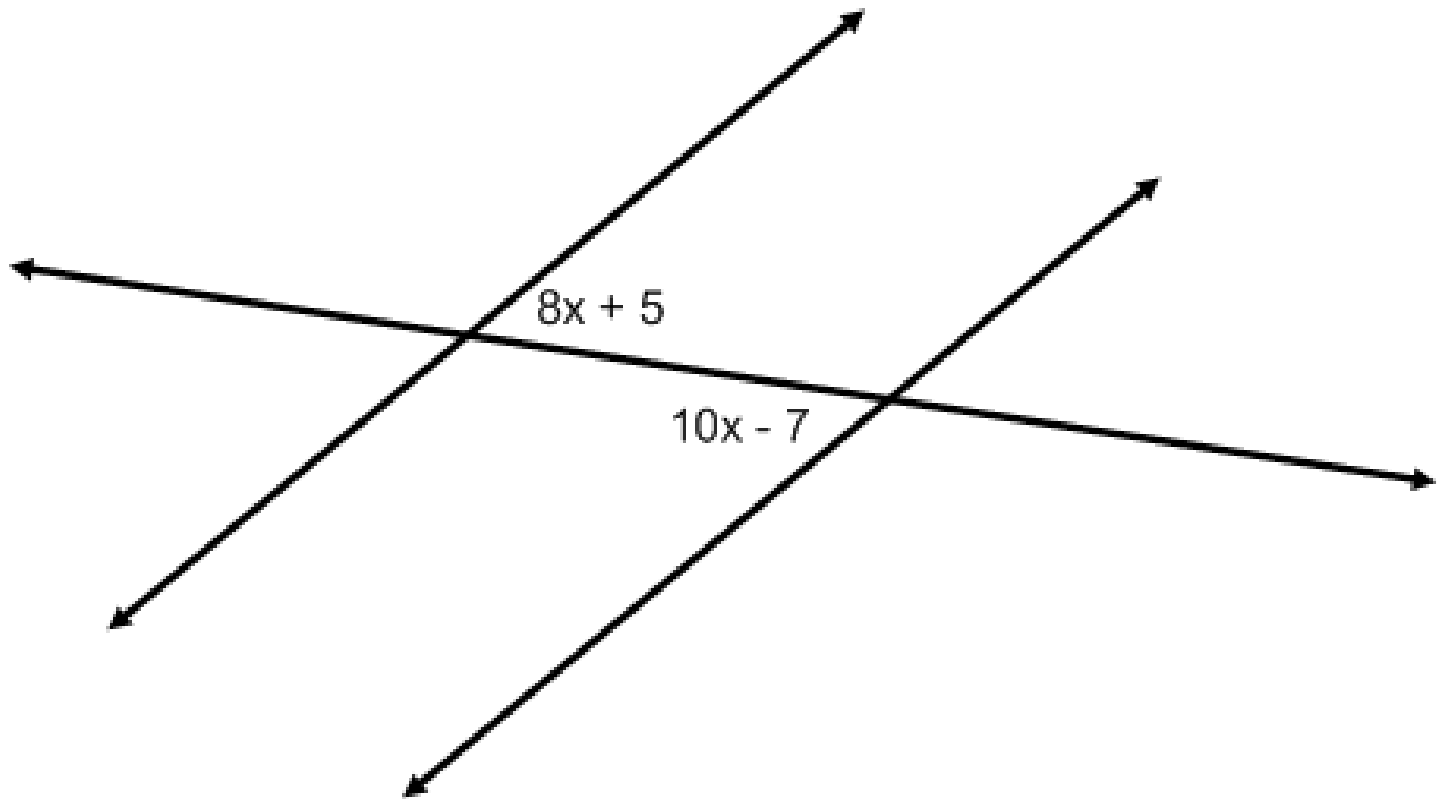
Reason: 137° Corresponding angles

d) $m\angle 3$

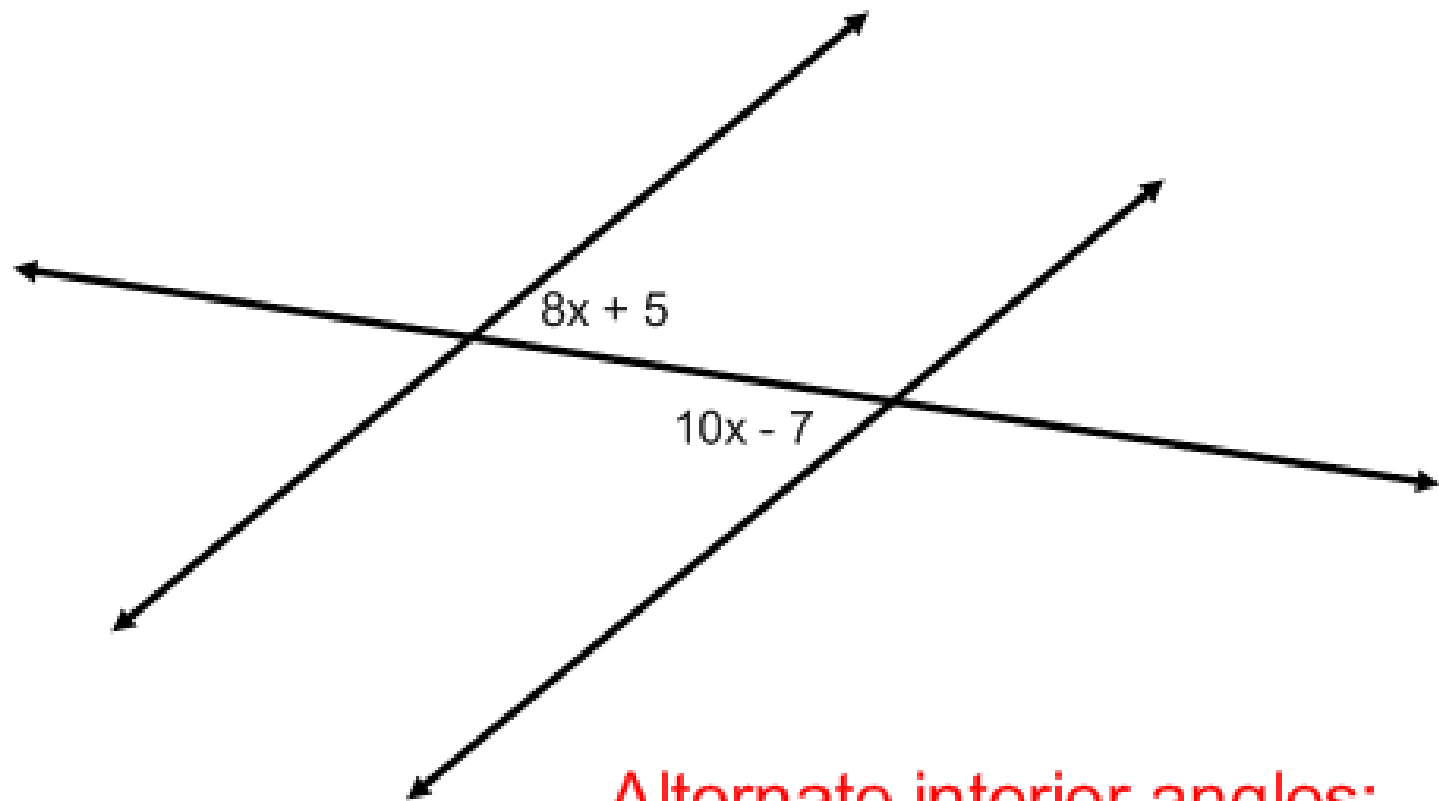
Reason: 43° Linear Pair/Alt exterior angles



#3: If the lines are parallel, what is the value of x ? Give a reason for your equation.



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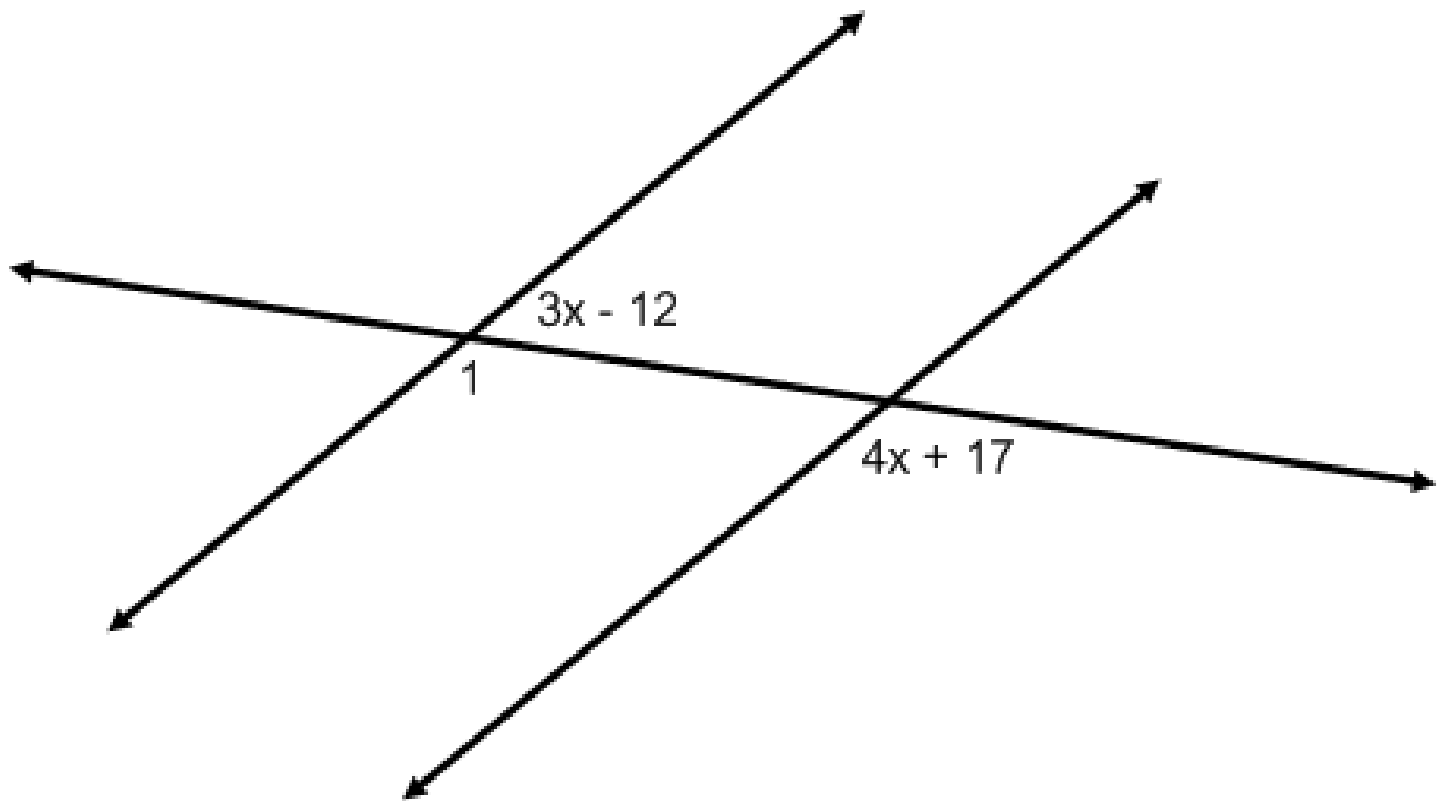
Alternate interior angles:

$$8x + 5 = 10x - 7$$

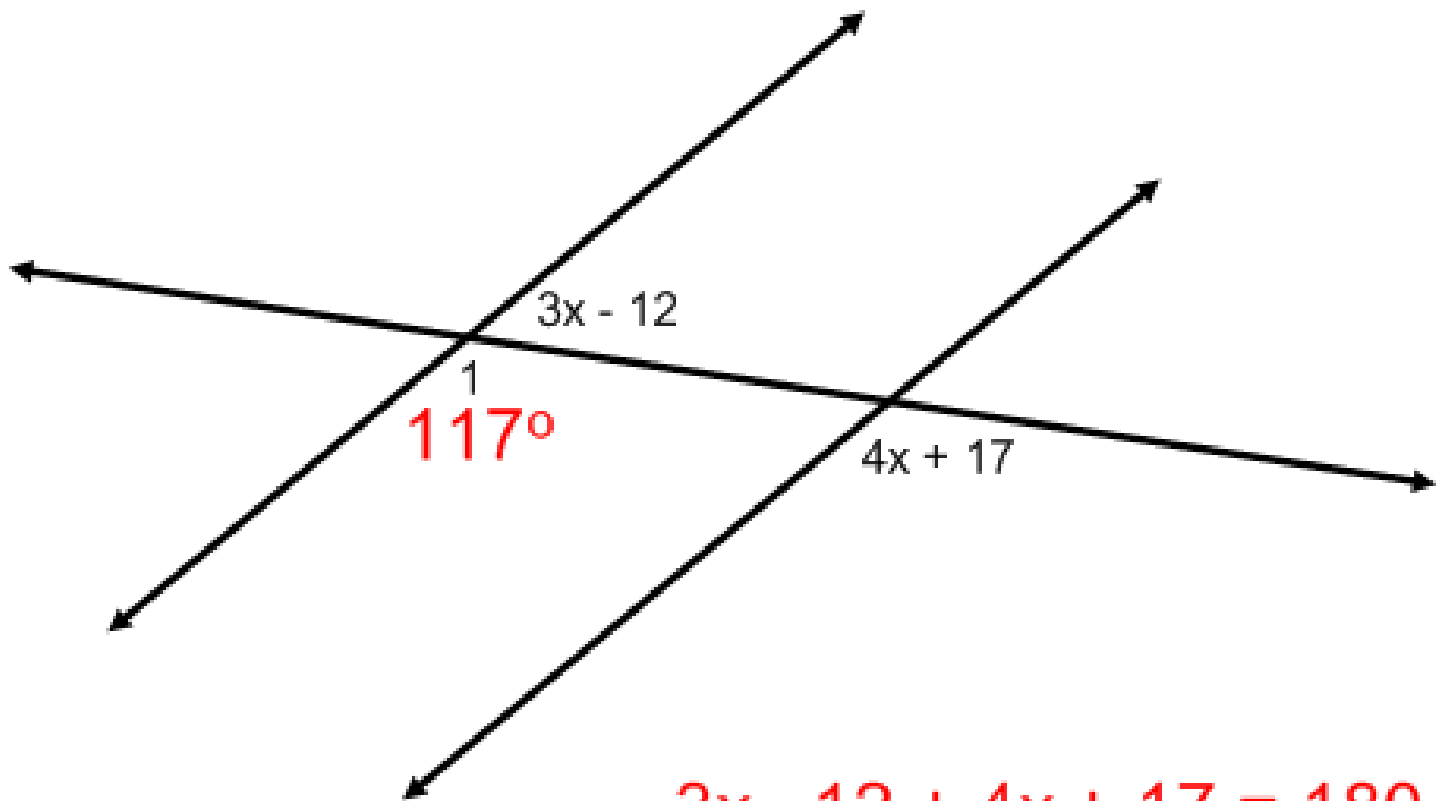
$$12 = 2x$$

$$6 = x$$

#4: If the lines are parallel, what is $m\angle 1$?



#4: If the lines are parallel, what is $m\angle 1$?



$$3x - 12 + 4x + 17 = 180$$

$$7x + 5 = 180$$

$$7x = 175$$

$$x = 25$$

$$4(25) + 17 = 117^\circ$$

#5: What does CPCTC stand for and how/when should you use it?

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Corresponding Parts of Congruent Triangles are Congruent

Used to prove parts of different triangles are congruent.