

Name: _____

Date: _____

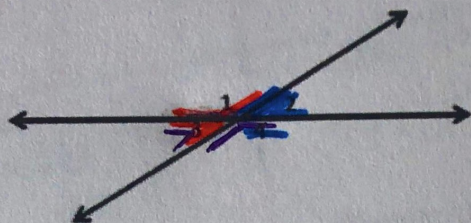
Adjacent and Vertical Angles

1. adjacent : next to or adjoining to something else.

2. Adjacent Angles:

share a common ray and vertex. (side by side)

3. Name the adjacent angles in the diagram below:



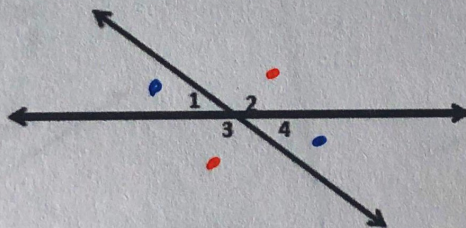
$\angle 1 \text{ \& } \angle 2$
 $\angle 1 \text{ \& } \angle 3$
 $\angle 3 \text{ \& } \angle 4$
 $\angle 2 \text{ \& } \angle 4$

4. Opposite angles formed by two intersecting lines are called vertical angles.

5. Vertical angles are congruent.

6. Congruent angles have the same angle measure

7. Name the vertical angles in the diagram below:



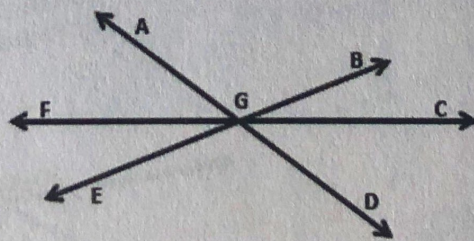
$\angle 1 \text{ \& } \angle 4$

$\angle 2 \text{ \& } \angle 3$

They cannot share a ray or "wall".

8. Name 3 pairs of adjacent angles and 3 pairs of vertical angles

adjacent
 $\angle 1 \text{ \& } \angle 2$
 $\angle 1 \text{ \& } \angle 6$
 $\angle 5 \text{ \& } \angle 4$



vertical

$\angle 1 \text{ \& } \angle 4$

$\angle 6 \text{ \& } \angle 3$

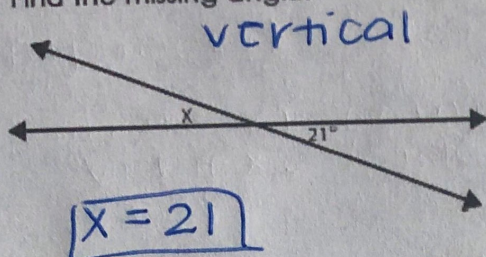
$\angle 2 \text{ \& } \angle 5$

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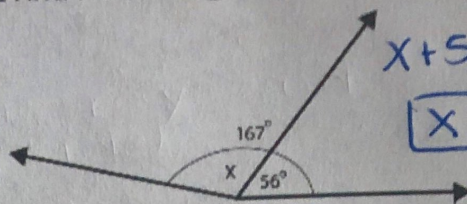
Practice: Adjacent and Vertical Angles

#1 Find the missing angle.



$x = 21$

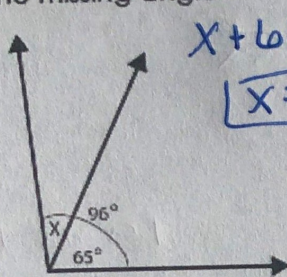
#2 Find the missing angle.



$x + 56 = 167$

$x = 111$

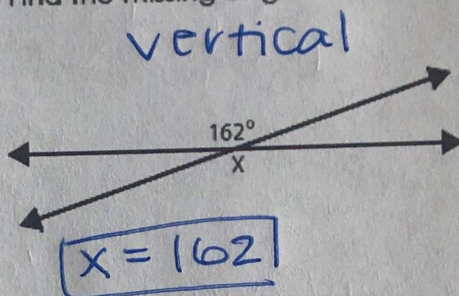
#3 Find the missing angle.



$x + 65 = 96$

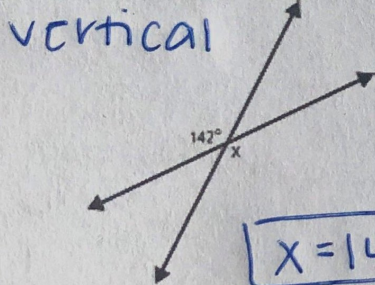
$x = 31$

#4 Find the missing angle.



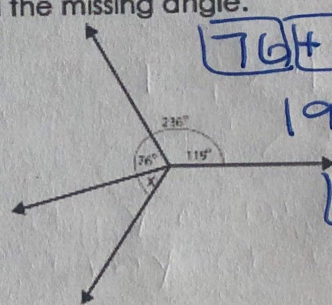
$x = 162$

#5 Find the missing angle.



$x = 142$

#6 Find the missing angle.

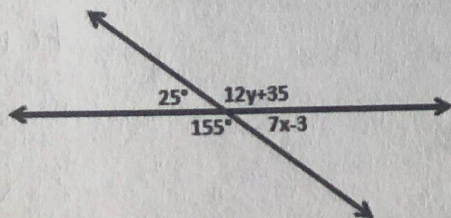


$76 + 119 + x = 236$

$191 + x = 236$

$x = 45$

#7 Write and solve an equation to find the value of x. Then, write and solve an equation to find the value of y.



$7x - 3 = 25$

$+3 \quad +3$

$7x = 28$

$\frac{7}{7} \quad \frac{28}{7}$

$x = 4$

$25 + 12y + 35 = 180$

$12y + 60 = 180$

$12y = 120$

$y = 10$