

Identify the transversal and classify each angle pair.

- $\angle 4$  and  $\angle 6$

$p$ , corresponding angles

- $\angle 1$  and  $\angle 2$

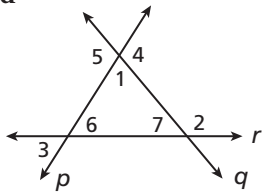
$q$ , alternate interior angles

- $\angle 3$  and  $\angle 4$

$p$ , alternate exterior angles

- $\angle 6$  and  $\angle 7$

$r$ , same-side interior angles



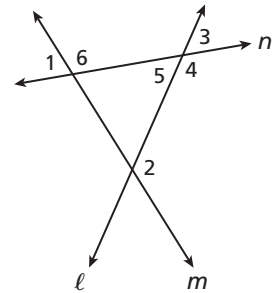
Identify the transversal and classify each angle pair.

- 10.  $\angle 5$  and  $\angle 2$

- 11.  $\angle 6$  and  $\angle 3$

- 12.  $\angle 2$  and  $\angle 4$

- 13.  $\angle 1$  and  $\angle 2$

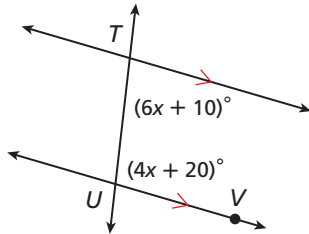


## 3-2 Angles Formed by Parallel Lines and Transversals (pp. 155–161)

### EXAMPLES

Find each angle measure.

- $m\angle TUV$



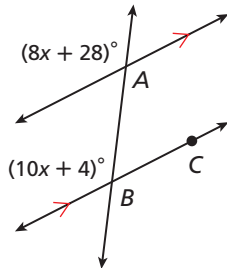
By the Same-Side Interior Angles Theorem,  
 $(6x + 10) + (4x + 20) = 180$ .

$$x = 15 \quad \text{Solve for } x.$$

Substitute the value for  $x$  into the expression for  $m\angle TUV$ .

$$m\angle TUV = 4(15) + 20 = 80^\circ$$

- $m\angle ABC$



By the Corresponding Angles Postulate,  
 $8x + 28 = 10x + 4$ .

$$x = 12 \quad \text{Solve for } x.$$

Substitute the value for  $x$  into the expression for one of the obtuse angles.

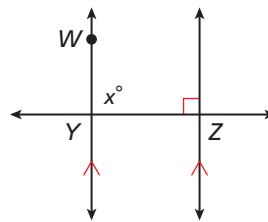
$$10(12) + 4 = 124^\circ$$

$\angle ABC$  is supplementary to the  $124^\circ$  angle, so  
 $m\angle ABC = 180 - 124 = 56^\circ$ .

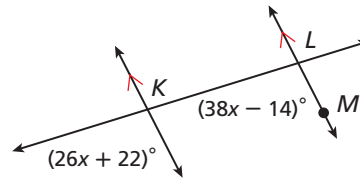
### EXERCISES

Find each angle measure.

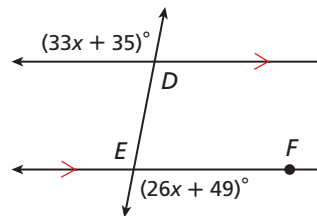
- 14.  $m\angle WYZ$



- 15.  $m\angle KLM$



- 16.  $m\angle DEF$



- 17.  $m\angle QRS$

