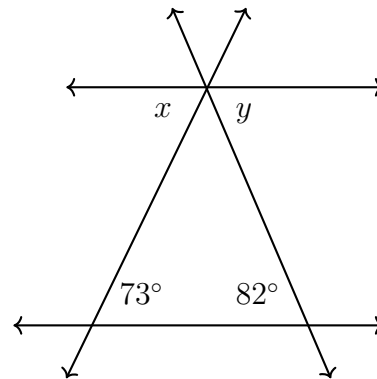


Name:

### 3.3 Classwork: Situations with parallel lines and transversals

1. Given two parallel lines, two transversals

(a) Find  $x, y$

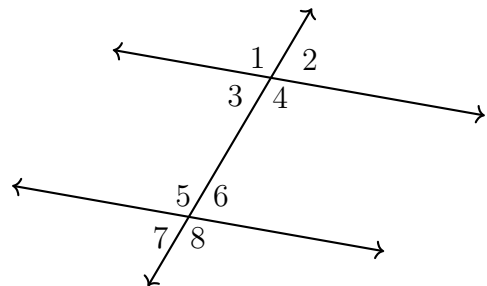


(b) What relationship are you using?

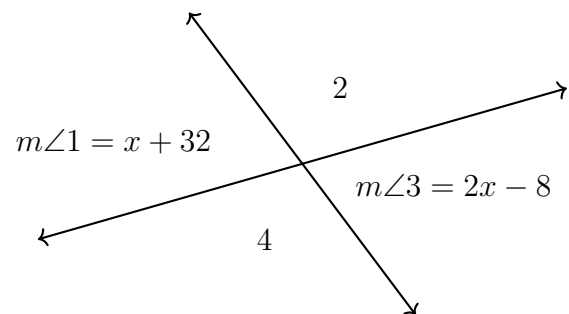
(e.g. vertical angles, same-side exterior angles, alternate interior angles, etc.)

2. Find  $m\angle 1$  given two parallel lines and a transversal, with

$$m\angle 2 = 2x + 17 \quad m\angle 7 = \frac{1}{2}(5x + 5)$$

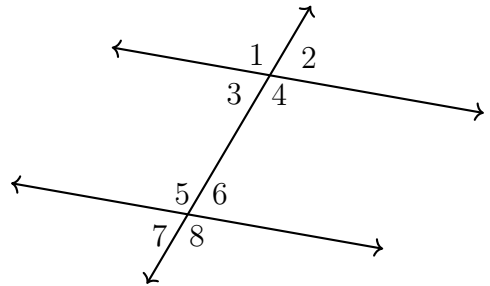


3. As shown below, two lines intersect making four angles:  $\angle 1$ ,  $\angle 2$ ,  $\angle 3$ , and  $\angle 4$ . Given that  $m\angle 1 = x + 32$  and  $m\angle 3 = 2x - 8$ , find  $m\angle 1$ .

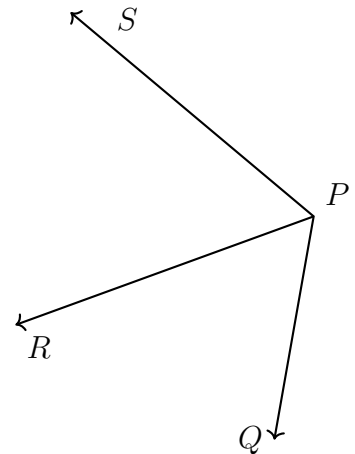


4. Find  $m\angle 1$  given two parallel lines and a transversal, with

$$m\angle 4 = 12(7x - 4) \quad m\angle 6 = 6(7x - 4)$$



5. An angle bisector is shown below, with  $\overrightarrow{PR}$  bisecting  $\angle QPS$ . Given  $m\angle QPR = 6x - 12$  and  $m\angle QPS = 10x + 4$ , find  $m\angle QPS$ .



6. In the diagram below  $\angle BOC = 7x - 50$  and  $\angle AOB = 4x - 3$ . Find  $m\angle AOB$ . CCSSM.8.G.B.5

