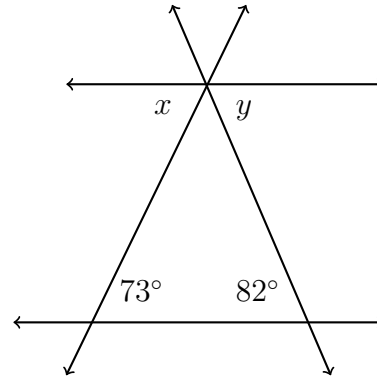


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3.3 Situations with parallel lines and transversals

1. Given two parallel lines, two transversals

(a) Find x, y

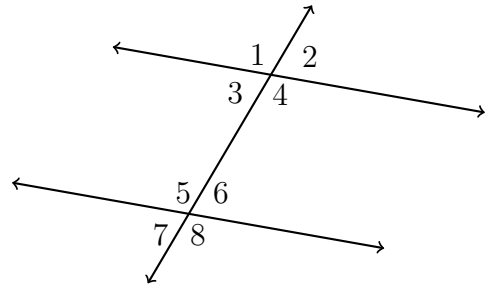


(b) What relationship are you using?

(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

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

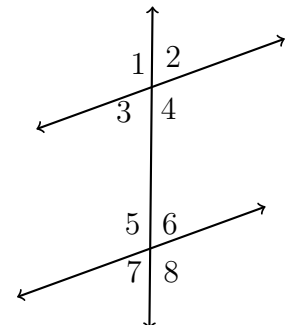


3. Do Now: Given two parallel lines and a transversal, as shown, with $m\angle 8 = 117^\circ$.

(a) What angle is corresponding to $\angle 8$?

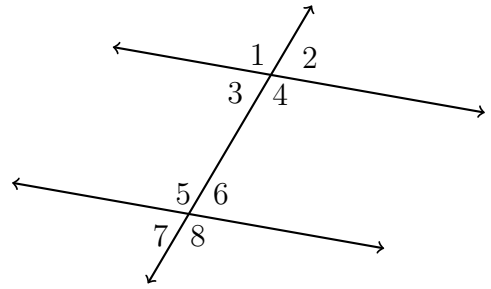
(b) What angle is alternate exterior to $\angle 8$?

(c) Find $m\angle 2$

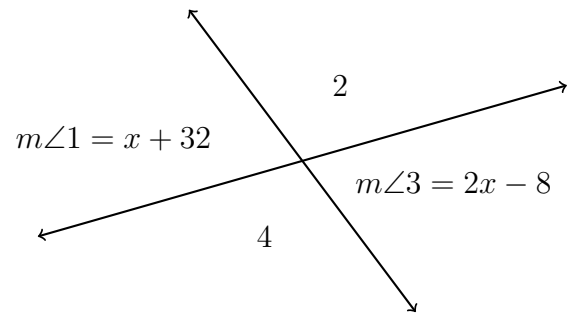


4. Find $m\angle 1$ given two parallel lines and a transversal, with

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

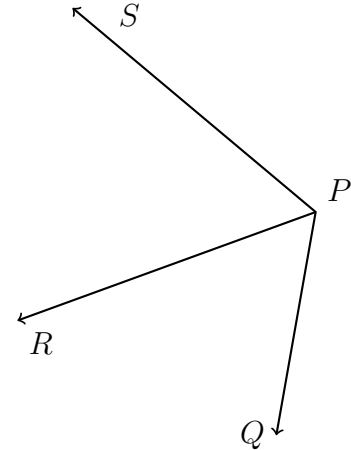


5. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = x + 32$ and $m\angle 3 = 2x - 8$, find $m\angle 1$.

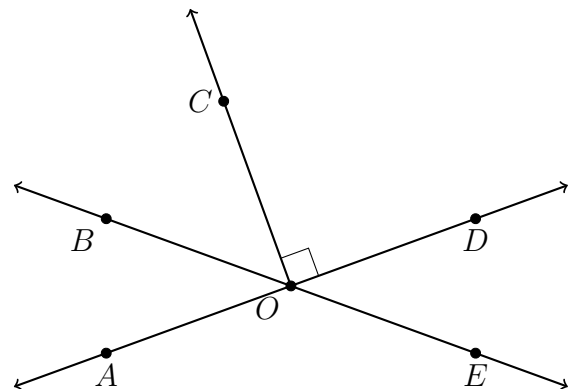


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6. An angle bisector is shown below, with \overrightarrow{PR} bisecting $\angle QPS$. Given $m\angle QPR = 6x - 12$ and $m\angle QPS = 10x + 4$, find $m\angle QPS$.



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



8. In the diagram below $\angle BOC = 7x$ and $\angle DOE = 3x + 15$. Find $m\angle AOB$. CCSSM.8.G.B.5

