Name:

BECA / Dr. Huson / Geometry 04 Analytic Geometry

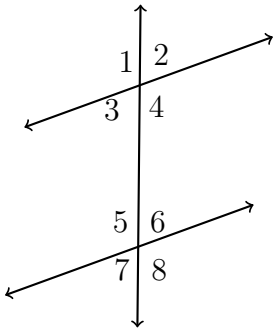
4.9 Review: Transversals and angles

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

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

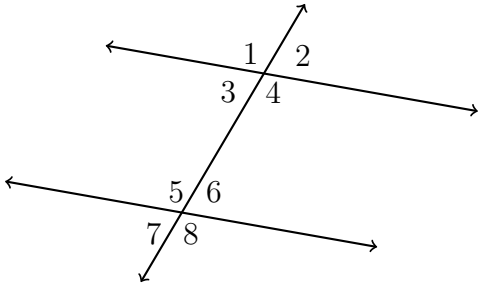
   (b) What angle is alternate exterior to $\angle 8$?

   (c) Find $m\angle 2$

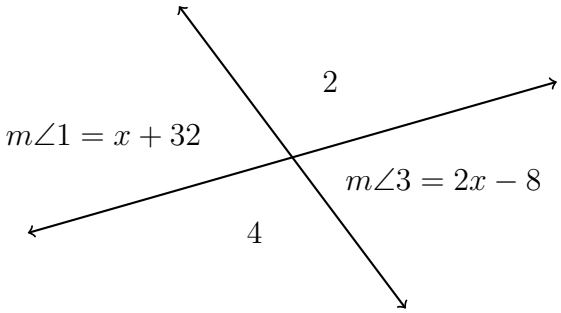


2. Find $m\angle 1$ given two parallel lines and a transversal, with

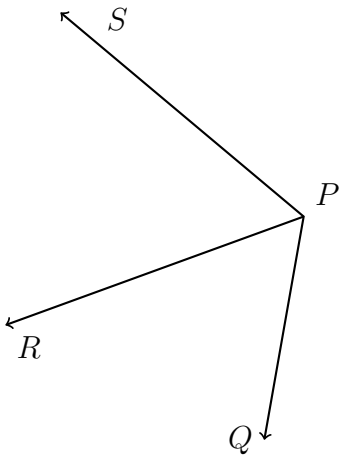
   $m\angle 2 = 2x + 17$ $\qquad$ $m\angle 7 = \frac{1}{2}(5x + 5)$



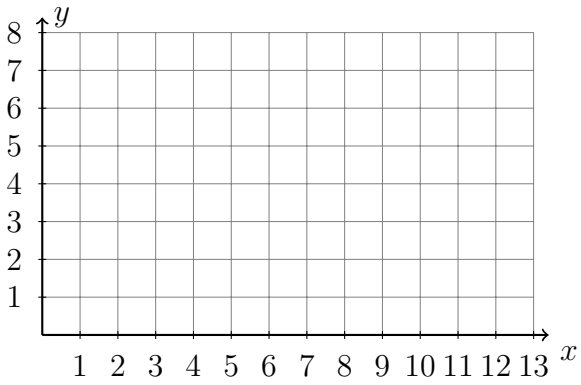
3. As shown below, two lines intersect making four angles: $\angle 1$, $\angle 2$, $\angle 3$, and $\angle 4$. Given that $m\angle 1 = x + 32$ and $m\angle 3 = 2x - 8$, find $m\angle 1$.



4. 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 $m\angle QPS$.



5. Graph and label $\triangle CAT$. Calculate the lengths of its sides. $C(1, 2)$, $A(10, 8)$, $T(10, 2)$.



6. The base of a right triangle is 8 centimeters long and its hypotenuse is 10 cm. Find its height, x cm.