3.1 Parallel lines and transversals

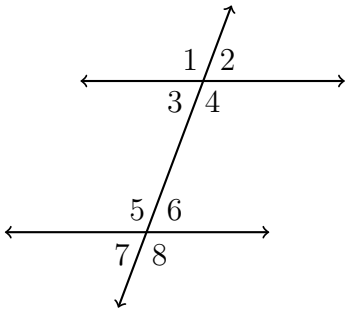
1. Given two parallel lines and a transversal, as shown, with $m\angle 6 = 70°$. Write down the value of each angle measure.

   (a) $m\angle 1 =$ (e) $m\angle 5 =$

   (b) $m\angle 2 =$ (f) $m\angle 6 =$

   (c) $m\angle 3 =$ (g) $m\angle 7 =$

   (d) $m\angle 4 =$ (h) $m\angle 8 =$



2. Label the relationship of each pair: adjacent, vertical, corresponding, alternate interior, same side interior, alternate exterior, or same side exterior

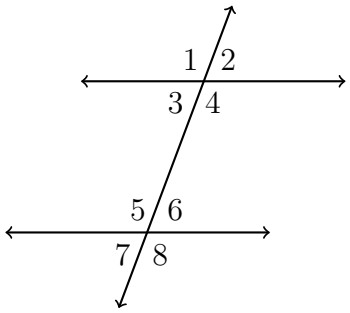
   (a) $\angle 1, \angle 4$

   (b) $\angle 3, \angle 6$

   (c) $\angle 5, \angle 3$

   (d) $\angle 6, \angle 2$

   (e) $\angle 1, \angle 8$



3. Identify each angle

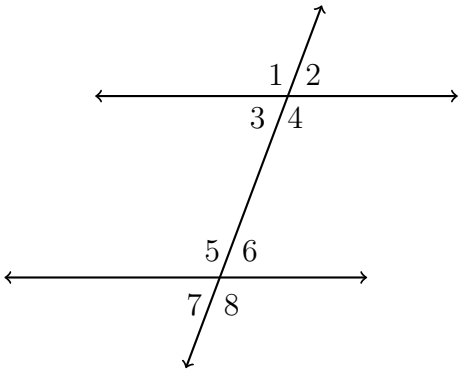
   (a) Opposite $\angle 4$

   (b) Corresponding to $\angle 3$

   (c) Alternate exterior to $\angle 8$

   (d) Same side interior to $\angle 5$

   (e) Alternate interior to $\angle 4$

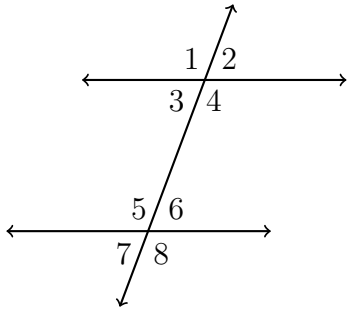


4. Given two parallel lines and a transversal, as shown, with $m\angle 1 = 125°$. Write down the value of each angle measure.

(a) $m\angle 5 =$

(b) $m\angle 6 =$

(c) $m\angle 4 = 5y$. Find y.



5. Given two parallel lines and a transversal, as shown, with $m\angle 6 = 68°$. Write down the value of each angle measure.

(a) What angle is corresponding to $\angle 6$?

(b) What angle is alternate interior to $\angle 4$?

(c) Find $m\angle 1$