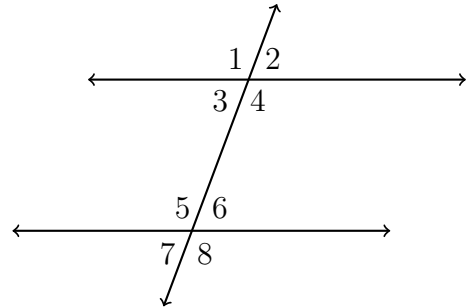
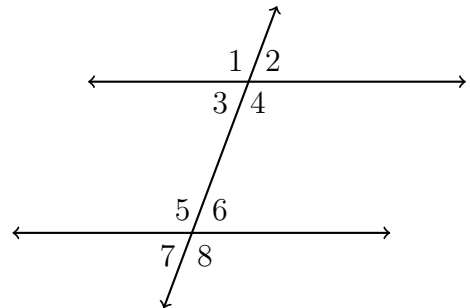


3.2 Finding angle measures for transverse lines

1. Given two parallel lines and a transversal, with $m\angle 4 = 3x$ and $m\angle 5 = x + 70$.
Write an equation, then solve for x .



2. Given two parallel lines and a transversal, with $m\angle 1 = 3x - 10$ and $m\angle 8 = 2x + 32$.
Write an equation, then solve for x .

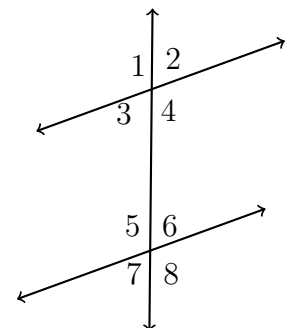


3. Do Now: Given two parallel lines and a transversal, as shown, with $m\angle 8 = 123^\circ$.

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

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

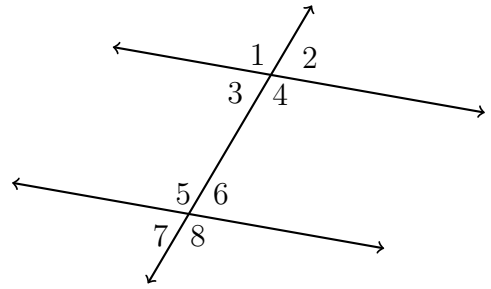
(c) Find $m\angle 2$



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

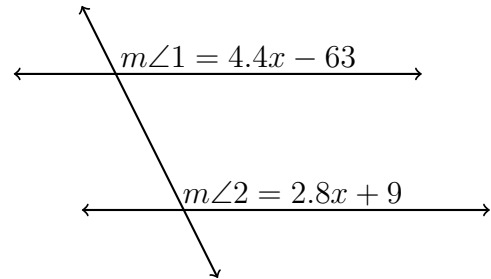
2

$$m\angle 2 = \frac{2}{7}(2x + 58) \qquad m\angle 7 = \frac{1}{7}(5x + 5)$$

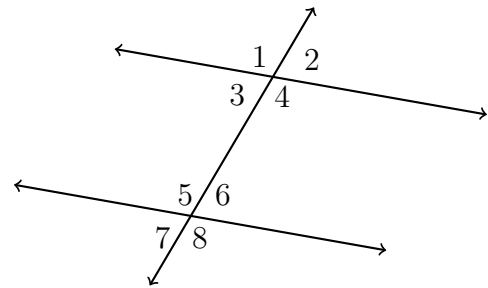


Name:

5. Two parallel lines intersect a transversal. Given corresponding angles $m\angle 1 = 4.4x - 63$ and $m\angle 2 = 2.8x + 9$, find the measure of $\angle 1$.

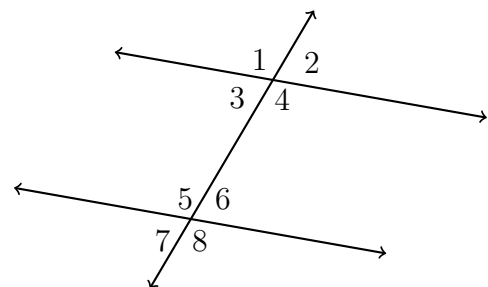


6. Given two parallel lines and a transversal, with $m\angle 3 = 18(x - 1)$ and $m\angle 5 = 18(x + 1)$. Find $m\angle 1$. (First write an equation, and solve for x)

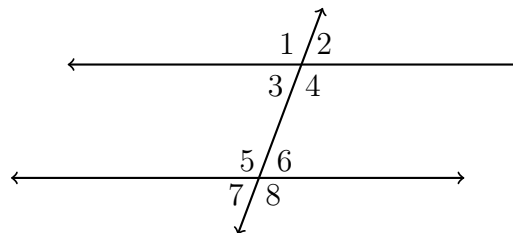


7. Find $m\angle 1$ given two parallel lines and a transversal, with

$$m\angle 4 = 10(7x - 4) \quad m\angle 6 = 8(7x - 4)$$



8. Given two parallel lines and a transversal, as shown below.



- (a) State the angle corresponding with $\angle 7$.

(b) What theorem would justify $m\angle 4 + m\angle 6 = 180^\circ$? _____

(c) What theorem would justify $\angle 3 \cong \angle 6$? _____

(d) Given $m\angle 1 = 117^\circ$ and $m\angle 8 = (4x - 3)^\circ$. Find x .

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

$$m\angle 1 = 2x + 58 \qquad m\angle 6 = 5x - 18$$

