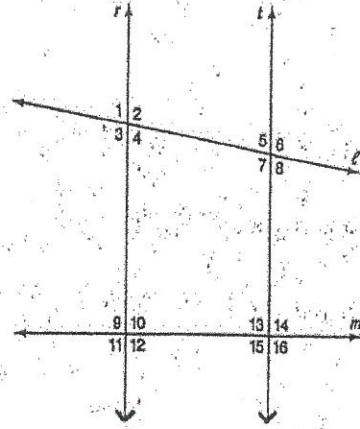


3.1-2 Practice Quiz

#1-5

Use the diagram to state the transversal that forms each pair of angles, then identify the special name for the angle pair.

1. $\angle 1$ and $\angle 12$ Alt. Ext., r
2. $\angle 2$ and $\angle 10$ Corresponding, r
3. $\angle 6$ and $\angle 3$ Alt. Ext., l
4. $\angle 14$ and $\angle 10$ Corresponding, m
5. $\angle 13$ and $\angle 7$ Same Side Interior, l



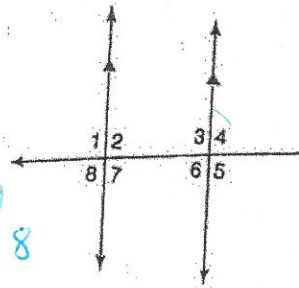
#6 & 7, Use diagram at right.

6. If $m\angle 4 = 2x - 25$ and $m\angle 8 = x + 26$, find $m\angle 2$. Explain your reasoning.

$$\begin{aligned} \angle 4 &= \angle 8 \text{ (Alt. Ext.)} \\ 2x - 25 &= x + 26 \\ x &= 51 \end{aligned}$$

$$\angle 8 = 51 + 26 = 77$$

$$\angle 2 = 77 \text{ (Vertical to } \angle 8)$$



7. $m\angle 2 = 3x - 10$ and $m\angle 3 = 4x + 50$. Find $m\angle 4$.

$$\angle 2 + \angle 3 = 180 \text{ (SSI)}$$

$$\begin{aligned} 7x + 40 &= 180 \\ 7x &= 140 \\ x &= 20 \end{aligned}$$

$$\begin{aligned} \angle 3 &= 130^\circ \\ \angle 4 &= 50^\circ \text{ (Linear pair)} \end{aligned}$$

(Plug -1 in for y)
 $4x - 5 = 7$

9. Solve the system.

$$\begin{cases} 4x + 5y = 7 \\ 3x - 2y = 11 \end{cases}$$

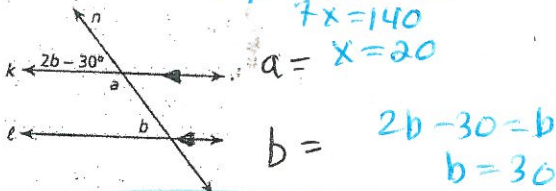
$$\begin{aligned} 12x + 15y &= 21 & 4x &= 12 \\ -12x + 8y &= -44 & x &= 3 \end{aligned}$$

$$\begin{aligned} 23y &= -23 \\ y &= -1 \end{aligned}$$

$$(3, -1)$$

(About 5 steps)

8.



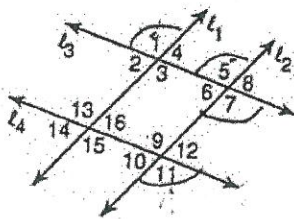
$$a = x = 20$$

$$\begin{aligned} b &= 2b - 30 = b \\ b &= 30 \end{aligned}$$

$$a = 150 \quad b = 30$$

10.

Given: $l_1 \parallel l_2$ and $l_3 \parallel l_4$
Prove: $\angle 1 \cong \angle 11$



one possible proof!

State	Reason
1. $l_1 \parallel l_2$	} given
2. $l_3 \parallel l_4$	
3. $\angle 1 = \angle 7$	3. Alt. Ext.
4. $\angle 7 = \angle 11$	4. Alt. Ext.
5. $\angle 1 = \angle 11$	5. Transitive (or Sub (3, 4))