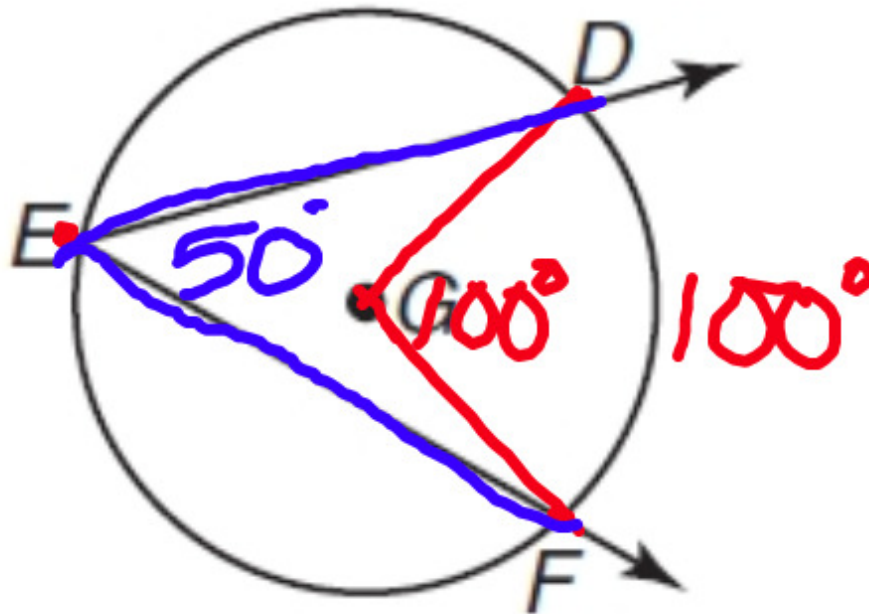


# 10-4 Inscribed Angles

**Inscribed Angles** An **inscribed angle** is an angle whose vertex is on a circle and whose sides contain chords of the circle. In  $\odot G$ , inscribed  $\angle DEF$  intercepts  $\widehat{DF}$ .

Inscribed Angle Theorem

If an angle is inscribed in a circle, then the measure of the angle equals one-half the measure of its intercepted arc.



$$m\angle DEF = \frac{1}{2}m\widehat{DF}$$



Use  $\odot P$  for Exercises 1-10. In  $\odot P$ ,  $\overline{RS} \parallel \overline{TV}$  and  $\overline{RT} \cong \overline{SV}$ .

In  $\odot P$ ,  $m\widehat{SV} = 120$  and  $m\angle RPS = 76$ . Find each measure.

3.  $m\angle PRS$

$52^\circ$

4.  $m\widehat{RSV}$

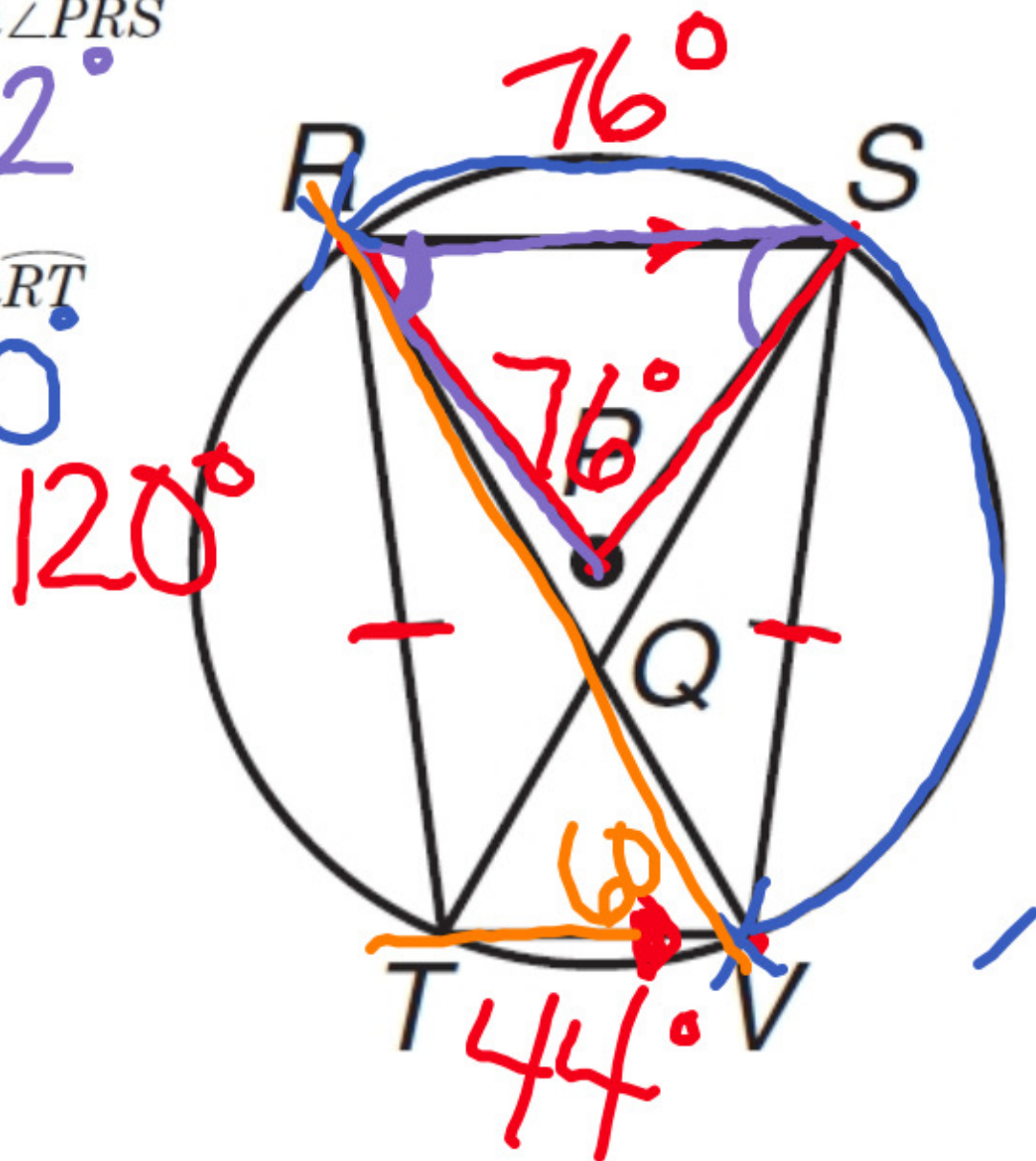
$196^\circ$

5.  $m\widehat{RT}$

$120$

6.  $m\angle RVT$

$60^\circ$



Use  $\odot P$  for Exercises 1-10. In  $\odot P$ ,  $\overline{RS} \parallel \overline{TV}$  and  $\overline{RT} \cong \overline{SV}$ .

In  $\odot P$ ,  $m\widehat{SV} = 120$  and  $m\angle RPS = 76$ . Find each measure.

7.  $m\angle QRS$

$60^\circ$

8.  $m\angle STV$

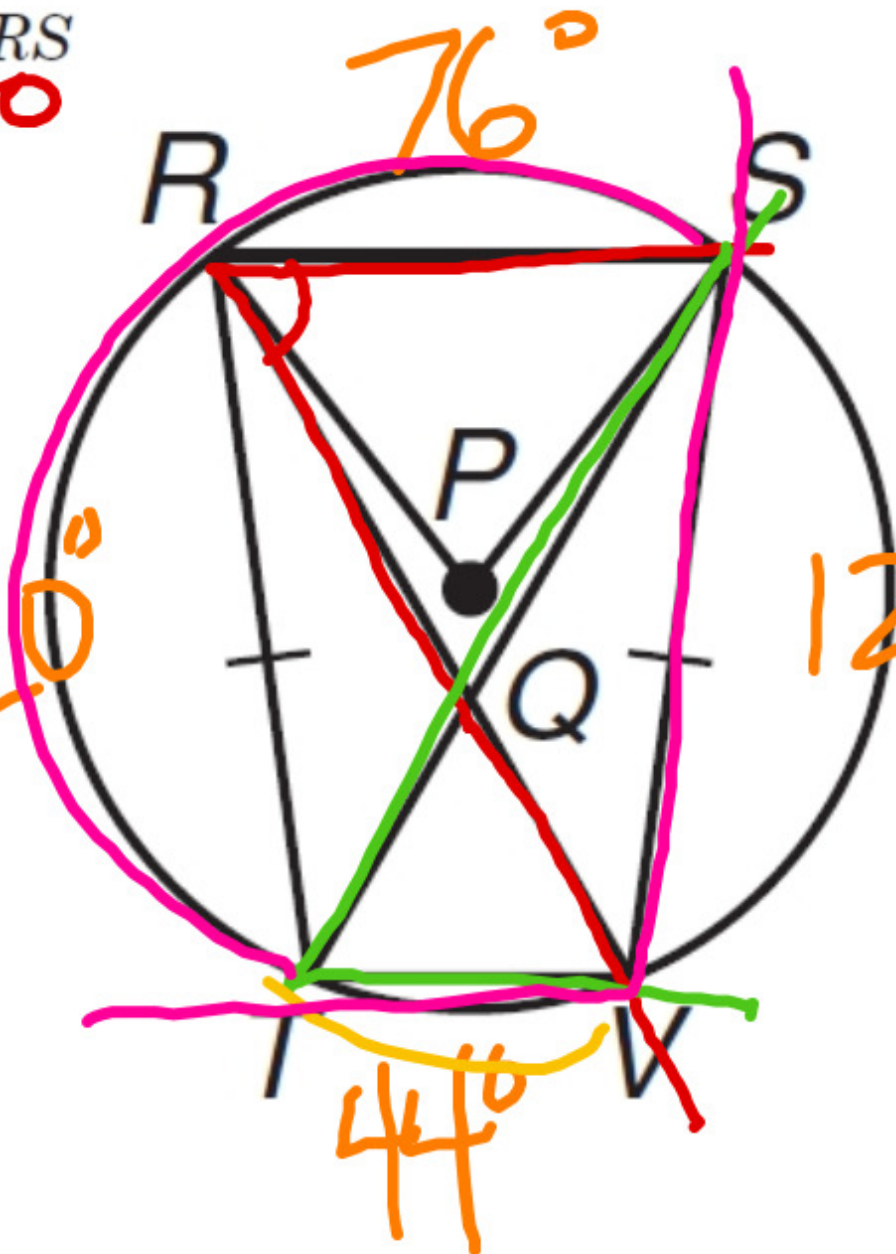
$60^\circ$

9.  $m\widehat{TV}$

$44^\circ$

10.  $m\angle SVT$

$\frac{196}{2}$   
 $= 98^\circ$





# 10-4 Skills Practice

## Inscribed Angles

In  $\odot S$ ,  $m\widehat{KL} = 80$ ,  $m\widehat{LM} = 100$ , and  $m\widehat{MN} = 60$ . Find the measure of each angle.

1.  $m\angle 1$

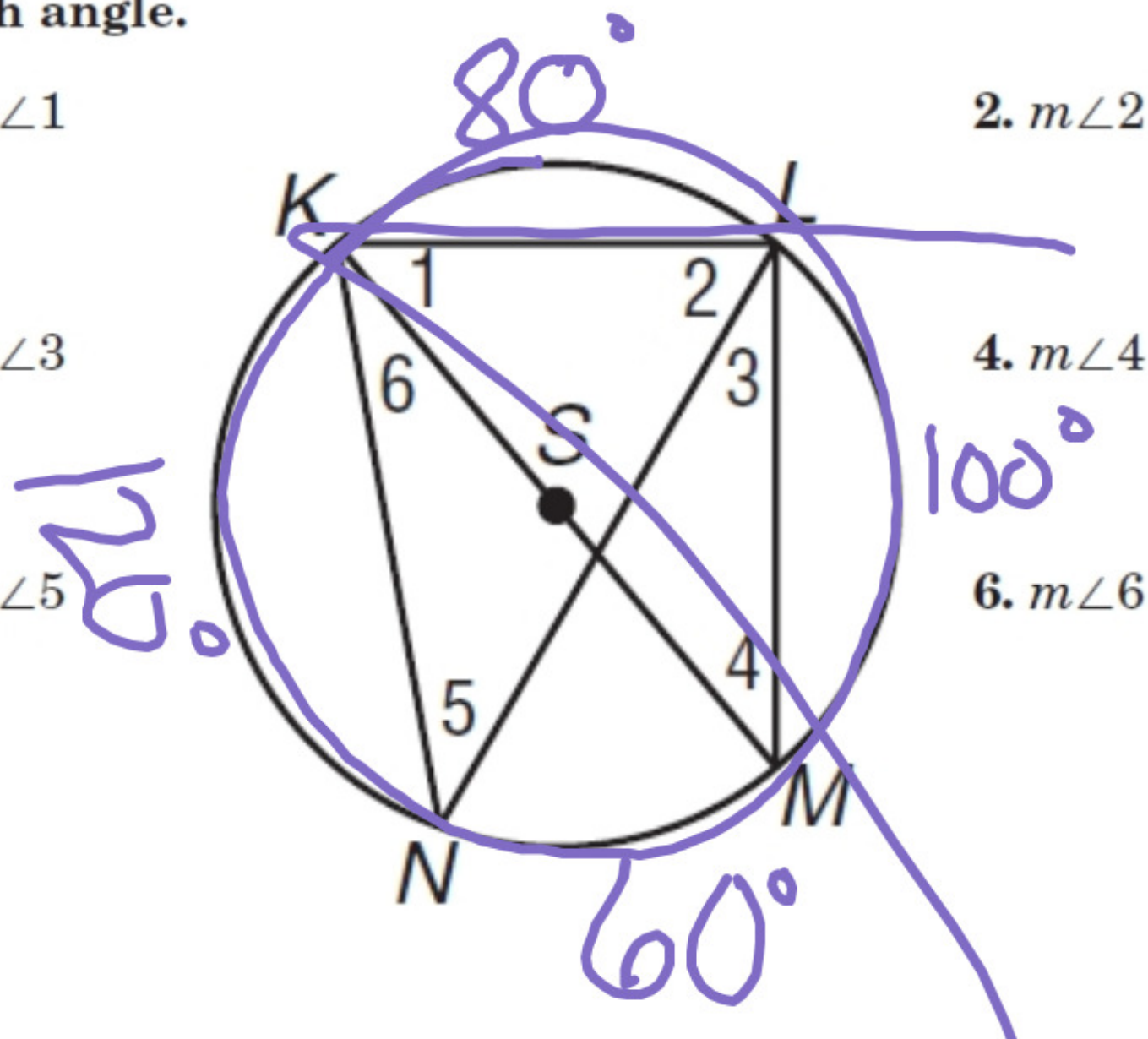
2.  $m\angle 2$

3.  $m\angle 3$

4.  $m\angle 4$

5.  $m\angle 5$

6.  $m\angle 6$

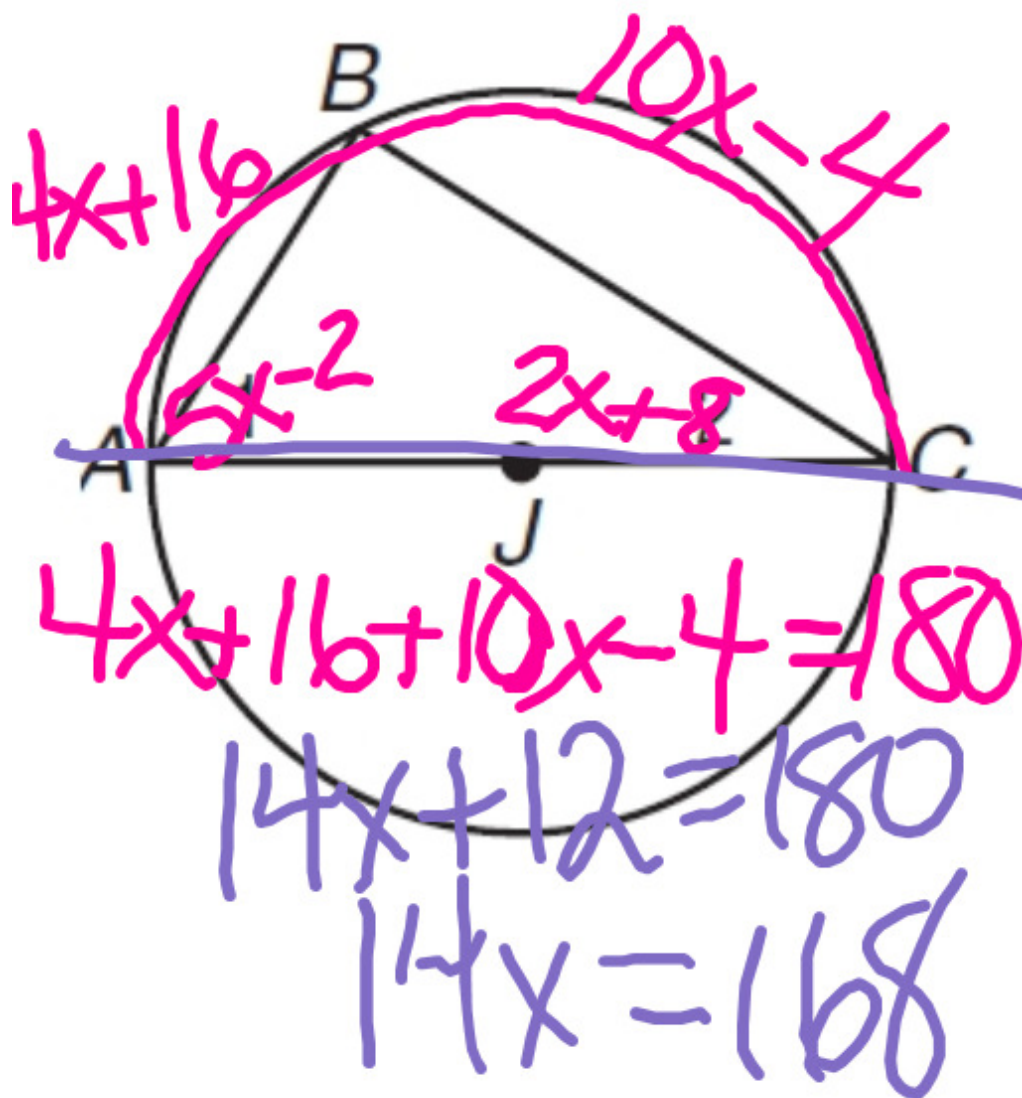


## 10-4 Skills Practice

### Inscribed Angles

**ALGEBRA** Find the measure of each numbered angle for each figure.

7.  $m\angle 1 = 5x - 2$ ,  $m\angle 2 = 2x + 8$



$$x = 12$$

$$m\angle 1 = 58^\circ$$

$$m\angle 2 = 32^\circ$$

$$4x + 16 + 10x - 4 = 180$$

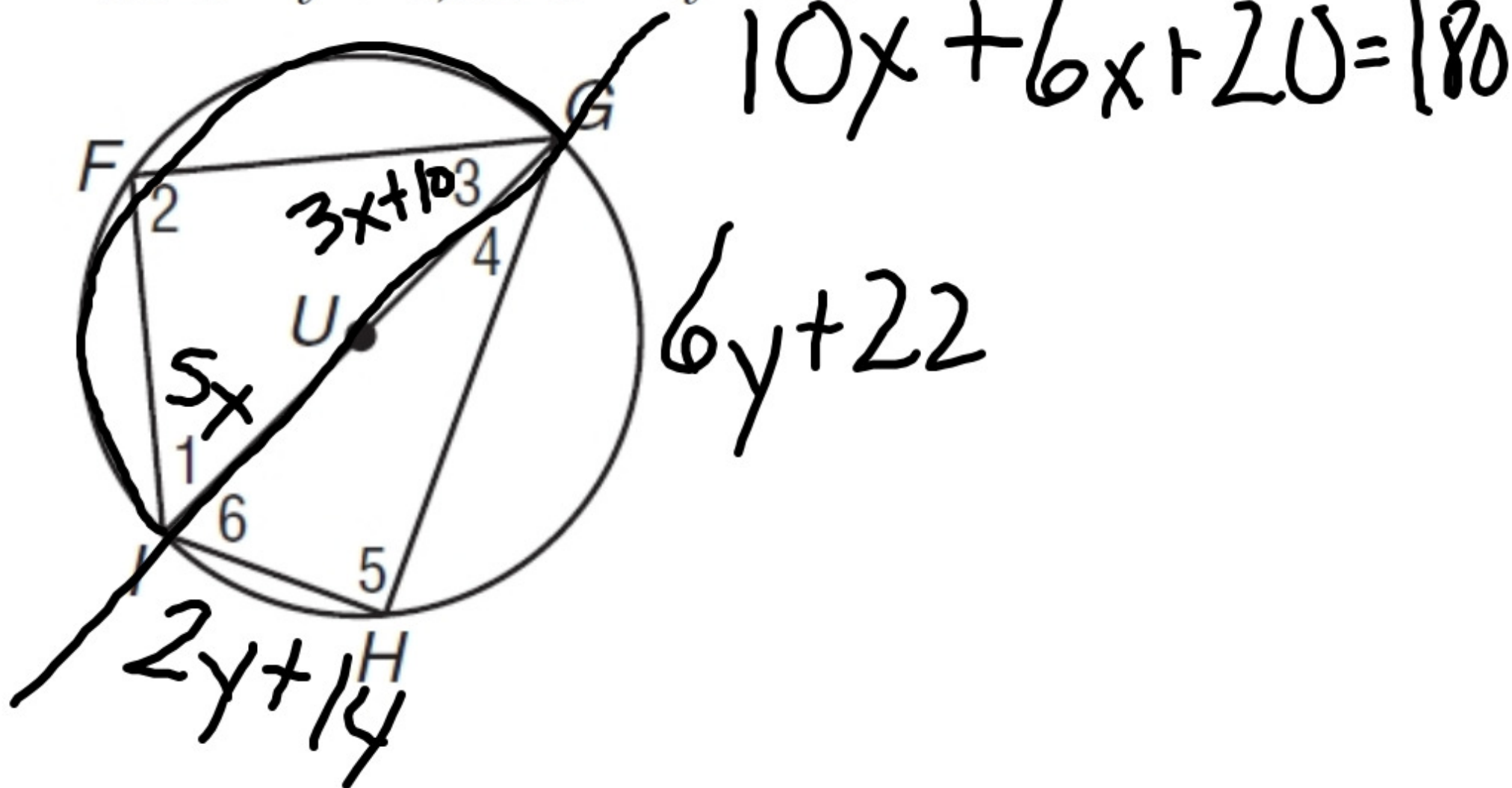
$$14x + 12 = 180$$

$$14x = 168$$

**10-4 Skills Practice***Inscribed Angles*

**ALGEBRA** Find the measure of each numbered angle for each figure.

8.  $m\angle 1 = 5x$ ,  $m\angle 3 = 3x + 10$ ,  
 $m\angle 4 = y + 7$ ,  $m\angle 6 = 3y + 11$





## 10-4 Skills Practice

### Inscribed Angles

**ALGEBRA** Find the measure of each numbered angle for each figure.

8.  $m\angle 1 = 5x$ ,  $m\angle 3 = 3x + 10$ ,  
 $m\angle 4 = y + 7$ ,  $m\angle 6 = 3y + 11$

