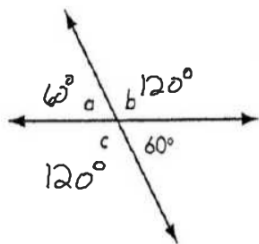
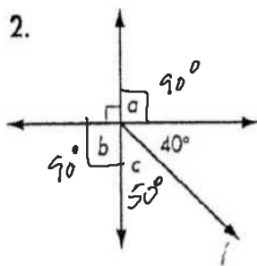


Find the angle measure for each letter.

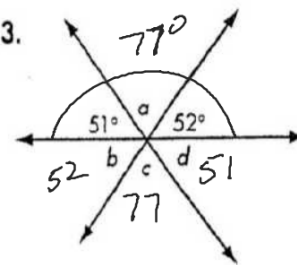
1.



2.

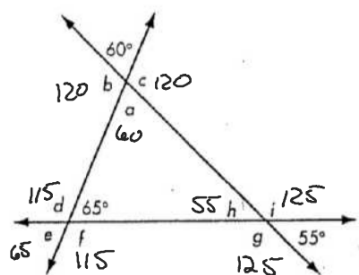


3.

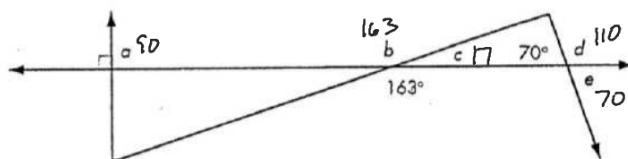


Find the angle measure for each letter.

4.

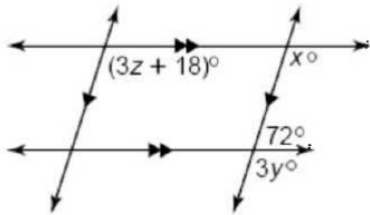


5.



Find the values of  $x$ ,  $y$  and  $z$  in each figure.

11.



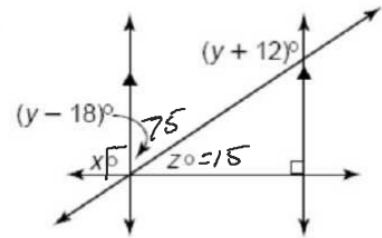
$$\begin{aligned} x + 72 &= 180 & 3y &= 108 \\ x &= 108 & y &= 36 \end{aligned}$$

$$3z + 18 = 108$$

$$3z = 90$$

$$z = 30$$

12.



$$x = 90^\circ$$

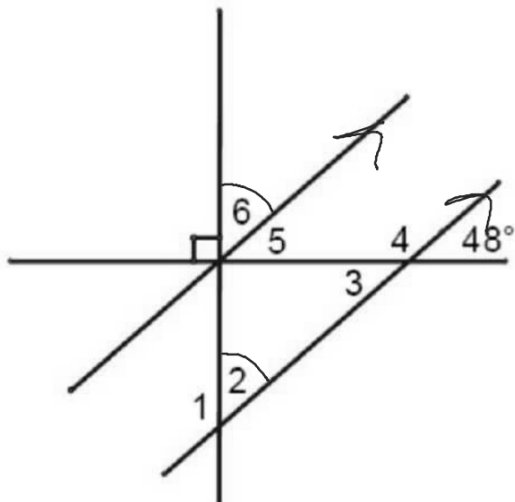
$$y - 18 + y + 12 = 180$$

$$2y - 6 = 180$$

$$2y = 186$$

$$y = 93$$

2. Given the information in the sketch that follows, find the measure of all angles.



1.  $m\angle 1 = \underline{132}$

2.  $m\angle 2 = \underline{42}$

3.  $m\angle 3 = \underline{48}$

4.  $m\angle 4 = \underline{132}$

5.  $m\angle 5 = \underline{48}$

6.  $m\angle 6 = \underline{42}$

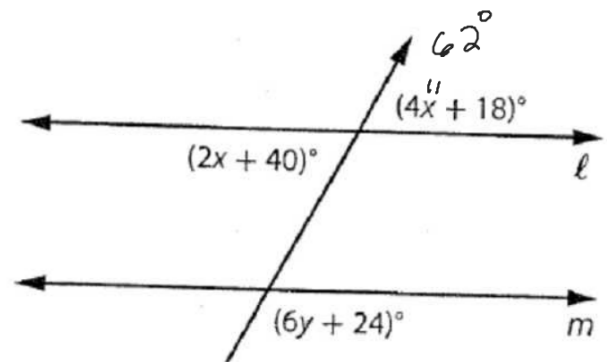
6. If lines  $l$  and  $m$  are parallel, find the values of  $x$  and  $y$  in the diagram to the right.

$$2x + 40 = 4x + 18$$

$$40 = 2x + 18$$

$$22 = 2x$$

$$x = 11$$



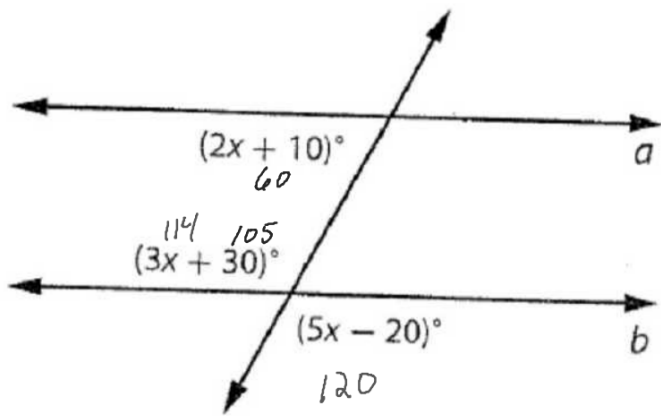
$$6y + 24 + 62 = 180$$

$$6y + 86 = 180$$

$$6y = 94$$

$$y = 15.\bar{6}$$

b. Are lines  $a$  and  $b$  parallel? Explain your reasoning.



$$3x + 30 = 5x - 20$$

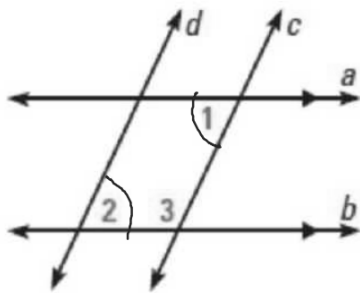
$$x = 25$$

$$3x + 30 + 2x + 10 = 180$$

$$x = 28$$

**GIVEN**  $\triangleright a \parallel b, \angle 1 \cong \angle 2$

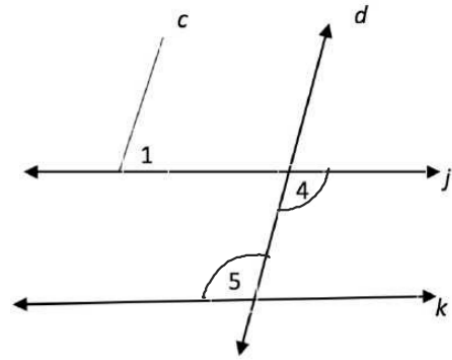
**PROVE**  $\triangleright c \parallel d$



Statement	Reason
1) $a \parallel b; \angle 1 \cong \angle 2$	1) Given
2) $m\angle 1 + m\angle 3 = 180$	2) Same-side Interior $\angle$ 's
3) $m\angle 2 + m\angle 3 = 180$	3) Substitution prop.
4) $c \parallel d$	4) If same side Interior $\angle$ 's are supp then lines are $\parallel$ .

5. Given:  $\angle 1$  and  $\angle 5$  are Supplementary  
 $\angle 1$  and  $\angle 4$  are Supplementary

Prove:  $j \parallel k$

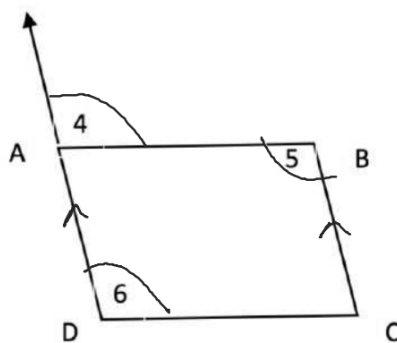


Statement	Reason
1) $\angle 1$ and $\angle 5$ are Supp $\angle 1$ and $\angle 4$ are Supp	1) Given
2) $m\angle 1 + m\angle 5 = 180$ $m\angle 1 + m\angle 4 = 180$	2) Def of Supp
3) $m\angle 1 + m\angle 5 = m\angle 1 + m\angle 4$	3) Substitution prop
4) $m\angle 5 = m\angle 4$	4) Subtraction prop
5) $j \parallel k$	5) If Alternate Int $\angle$ 's are $\cong$ then lines are $\parallel$ .

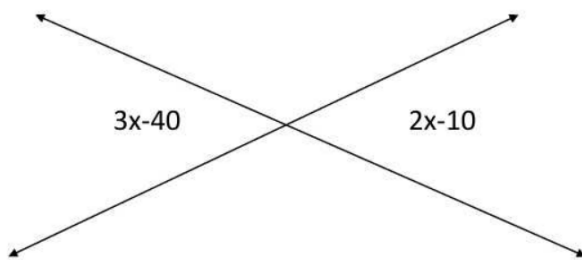


4. Given:  $\angle 5 \cong \angle 6$ ;  $\angle 6 \cong \angle 4$

Prove:  $\overline{AD} \parallel \overline{BC}$



Find the value of  $x$ .



Find the value of  $y$ .

