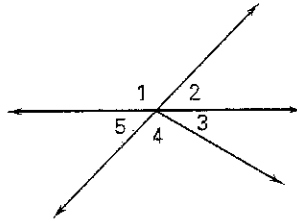


**Practice A**

For use with pages 44-50

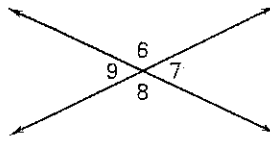
Use the figure at the right.

1. Are  $\angle 1$  and  $\angle 2$  adjacent? **yes**
2. Are  $\angle 1$  and  $\angle 2$  a linear pair? **yes**
3. Are  $\angle 3$  and  $\angle 4$  a linear pair? **no**
4. Are  $\angle 2$  and  $\angle 5$  vertical angles? **yes**
5. Are  $\angle 1$  and  $\angle 4$  vertical angles? **no**
6. Are  $\angle 3$  and  $\angle 5$  vertical angles? **no**



Use the figure at the right.

- LP 7. If  $m\angle 6 = 78^\circ$ , then  $m\angle 7 =$   $102^\circ$
- V 8. If  $m\angle 8 = 94^\circ$ , then  $m\angle 6 =$   $94^\circ$
- LP 9. If  $m\angle 9 = 124^\circ$ , then  $m\angle 8 =$   $56^\circ$
- V 10. If  $m\angle 7 = 47^\circ$ , then  $m\angle 9 =$   $47^\circ$
- LP 11. If  $m\angle 8 = 158^\circ$ , then  $m\angle 9 =$   $22^\circ$
- LP 12. If  $m\angle 7 = 15^\circ$ , then  $m\angle 6 =$   $165^\circ$



Each problem is a new problem and does NOT build off of information from previous problems.

Find the complement and supplement of the following:

13. If  $m\angle A = 42^\circ$ , Complement  $48^\circ$  Supplement  $138^\circ$
14. If  $m\angle B = 78^\circ$ , Complement  $12^\circ$  Supplement  $102^\circ$
15. If  $m\angle A = 17^\circ$ , Complement  $73^\circ$  Supplement  $163^\circ$
16. If  $m\angle B = 45^\circ$ , Complement  $45^\circ$  Supplement  $135^\circ$

Find the value of the variable.

17. 
$$\begin{aligned} 110 &= 2x + 40 \\ -40 &\quad -40 \\ \hline 70 &= 2x \\ \frac{70}{2} &= \frac{2x}{2} \\ 35 &= x \end{aligned}$$

18. 
$$\begin{aligned} x &= 5x - 48 \\ -x &\quad -5x \\ \hline -4x &= -48 \\ \frac{-4x}{-4} &= \frac{-48}{-4} \\ x &= 12 \end{aligned}$$

19. 
$$\begin{aligned} 64 &= 48 + x \\ -48 &\quad -48 \\ \hline 16 &= x \end{aligned}$$

20. 
$$\begin{aligned} 75 &= 2x - 5 \\ 70 &= 2x \\ -70 &\quad -70 \\ \hline 2x &= 110 \\ \frac{2x}{2} &= \frac{110}{2} \\ x &= 55 \end{aligned}$$

21. 
$$\begin{aligned} 3x + 8 &= x \\ 4x + 8 &= 180 \\ = 8 &\quad -8 \\ \hline 4x &= 172 \\ \frac{4x}{4} &= \frac{172}{4} \\ x &= 43 \end{aligned}$$

22. 
$$\begin{aligned} 2x + 8 &+ 3x + 17 &= 180 \\ 5x + 25 &= 180 \\ -25 &\quad -25 \\ \hline 5x &= 155 \\ \frac{5x}{5} &= \frac{155}{5} & x = 31 \end{aligned}$$