## Textbook p32 #14-24, 26, 29, 32

## PRACTICE AND PROBLEM SOLVING

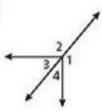
Tell whether the angles are only adjacent, adjacent and form a linear pair, or not adjacent.

14. ∠1 and ∠4

15. ∠2 and ∠3

**16.** ∠3 and ∠4

17. ∠3 and ∠1



Given  $m\angle A = 56.4^{\circ}$  and  $m\angle B = (2x - 4)^{\circ}$ , find the measure of each of the following.

18. supplement of  $\angle A$ 

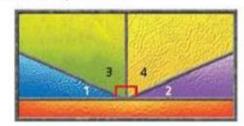
19. complement of  $\angle A$ 

20. supplement of  $\angle B$ 

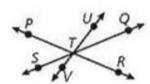
**21.** complement of  $\angle B$ 

22. Multi-Step An angle's measure is 3 times the measure of its complement. Find the measure of the angle and the measure of its complement.

23. Art In the stained glass pattern,  $\angle 1 \cong \angle 2$ .  $\angle 1$  and  $\angle 3$  are complementary, and  $\angle 2$  and  $\angle 4$  are complementary. If  $m\angle 1 = 22.3^{\circ}$ , find  $m\angle 2$ ,  $m\angle 3$ , and  $m\angle 4$ .



Name the pairs of vertical angles.



**Multi-Step**  $\angle ABD$  and  $\angle BDE$  are supplementary. Find the measures of both angles.

**26.**  $m \angle ABD = 5x^{\circ}, m \angle BDE = (17x - 18)^{\circ}$ 

Multi-Step  $\angle ABD$  and  $\angle BDC$  are complementary. Find the measures of both angles.

**29.** 
$$m\angle ABD = (5y+1)^{\circ}, m\angle BDC = (3y-7)^{\circ}$$

Critical Thinking Explain why an angle that is supplementary to an acute angle must be an obtuse angle.