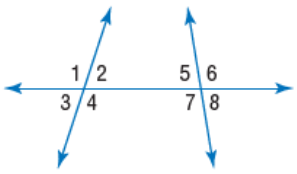
CHAPTER 3 Practice Test

Classify the relationship between each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior* angles.

1. $\angle 6$ and $\angle 3$
2. $\angle 4$ and $\angle 7$
3. $\angle 5$ and $\angle 4$



Determine the slope of the line that contains the given points.

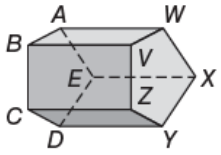
4. $G(8, 1), H(8, -6)$
5. $A(0, 6), B(4, 0)$
6. $E(6, 3), F(-6, 3)$
7. $E(5, 4), F(8, 1)$

In the figure, $m\angle 8 = 96$ and $m\angle 12 = 42$. Find the measure of each angle. Tell which postulate(s) or theorem(s) you used.

Find the distance between each pair of parallel lines with the given equations.

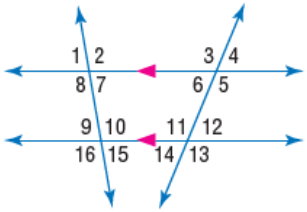
16. $y = x - 11$
    $y = x - 7$
17. $y = -2x + 1$
    $y = -2x + 16$

18. **MULTIPLE CHOICE** Which segment is skew to $\overline{CD}$?

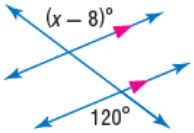


A $\overline{ZY}$
C $\overline{DE}$
B $\overline{AB}$
D $\overline{VZ}$

8. ∠9
9. ∠11
10. ∠6



11. Find the value of x in the figure below.

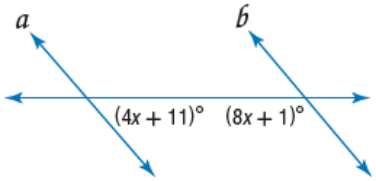


12. **FITNESS** You would like to join a fitness center. Fit-N-Trim charges \$80 per month. Fit-For-Life charges a one-time membership fee of \$75 and \$55 per month.
    a. Write and graph two equations in slope-intercept form to represent the cost y to attend each fitness center for x months.
    b. Are the lines you graphed in part a parallel? Explain why or why not.
    c. Which fitness center offers the better rate? Explain.

Write an equation in slope-intercept form for each line described.

13. passes through $(-8, 1)$, perpendicular to $y = 2x - 17$
14. passes through $(0, 7)$, parallel to $y = 4x - 19$
15. passes through $(-12, 3)$, perpendicular to $y = -\frac{2}{3}x - 11$

19. Find x so that $a \parallel b$. Identify the postulate or theorem you used.

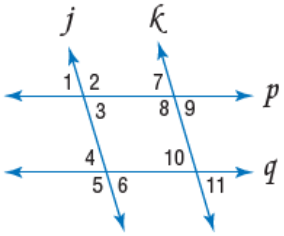


COORDINATE GEOMETRY **Find the distance from P to ℓ.**

20. Line ℓ contains points $(-4, 2)$ and $(3, -5)$. Point P has coordinates $(1, 2)$.
21. Line ℓ contains points $(6, 5)$ and $(2, 3)$. Point P has coordinates $(2, 6)$.

Given the following information, determine which lines, if any, are parallel. State the postulate or theorem that justifies your answer.

22. ∠4 ≅ ∠10
23. ∠9 ≅ ∠6
24. ∠7 ≅ ∠11



25. **JOBS** Hailey works at a gift shop. She is paid \$10 per hour plus a 15% commission on merchandise she sells. Write an equation in slope-intercept form that represents her earnings in a week if she sold \$550 worth of merchandise.