Alg Name_____

3-9 Parallel & Perpendicular Lines_hw

Date_____ Period____

Determine whether the graphs of the equations are parallel lines.

1. $x + 4 = y$
$y - x = -3$

2. $3x - 4 = y$
$y - 3x = 8$

3. $y + 3 = 6x$
$-6x - y = 2$

4. $y = -4x + 2$
$-5 = -2y + 8x$

5. $y = 2x + 7$
$5y + 10x = 20$

6. $y = -7x - 5$
$2y = -7x - 10$

7. $3x - y = -9$
$2y - 6x = -2$

8. $y - 6 = -6x$
$-2x + y = 5$

9. $-3x + y = 4$
$3x - y = -6$

10. $-4 = y + 2x$
$6x + 3y = 4$

11. $8x - 4y = 16$
$5y - 10x = 3$

12. $-4x = 3y + 5$
$8x + 6y = -1$

Determine whether the graphs of the equations are perpendicular lines.

13. $y = -4x + 3$
$4y + x = -1$

14. $y = -\frac{2}{3}x + 4$
$3x + 2y = 1$

15. $x + y = 6$
$4y - 4x = 12$

16. $2x - 5y = -3$
$5x + 2y = 6$

17. $y = -x + 8$
$x - y = -1$

18. $2x + 6y = -3$
$12y = 4x + 20$

19. $6x + y = -4$
$6x - y = 4$

20. $4y = x + 5$
$9y + 3x = 2$

21. $6y - x = -12$
$\frac{1}{6}x + y = 3$

22. $\frac{2}{3}x + y = 6$
$8y - 12x - 12 = 0$

23. $\frac{2}{5}x - \frac{1}{10}y = 20$
$5x + 10y = -5$

24. $\frac{1}{2}x + \frac{3}{4}y = 6$
$-\frac{3}{2}x + y = 4$

25. $\frac{3}{8}x - \frac{y}{2} = 1$
$\frac{4}{3}x - y + 1 = 0$

Answers to 3-9 Parallel & Perpendicular Lines_hw

Exercises
1. Yes
2. Yes
3. No
4. No
5. No
6. No
7. Yes
8. No
9. Yes
10. Yes
11. Yes
12. Yes
13. No
14. No
15. Yes
16. Yes
17. Yes
18. No
19. No
20. No
21. No
22. Yes
23. No
24. Yes
25. No

3-9 Parallel & Perpendicular Lines_hw

Write equation of a line (y=mx+b) based on the following information given.

26) through: $(3, -4)$, perp. to $y = -3x + 2$

27) through: $(-1, -2)$, perp. to $y = -\frac{1}{6}x + 1$

28) through: $(2, -2)$, perp. to $y = -2x + 1$

29) through: $(4, 4)$, perp. to $y = -\frac{1}{2}x - 1$

30) through: $(-3, 2)$, perp. to $y = \frac{1}{2}x + 4$

31) through: $(3, -1)$, perp. to $y = -\frac{3}{2}x + 2$

32) through: $(-1, 1)$, perp. to $y = -\frac{1}{3}x - 1$

33) through: $(5, -4)$, perp. to $y = \frac{5}{3}x - 5$

34) through: $(-4, -1)$, perp. to $y = -\frac{4}{5}x - 4$

35) through: $(4, 2)$, perp. to $y = \frac{4}{3}x - 4$

36) through: $(3, -2)$, perp. to $y = \frac{3}{2}x + 3$

37) through: $(-5, 0)$, perp. to $y = -\frac{3}{2}x + 5$

Answers to 3-9 Parallel & Perpendicular Lines_hw

26) $y = \frac{1}{3}x - 5$ 27) $y = 6x + 4$ 28) $y = \frac{1}{2}x - 3$ 29) $y = 2x - 4$

30) $y = -2x - 4$ 31) $y = \frac{2}{3}x - 3$ 32) $y = 3x + 4$ 33) $y = -\frac{3}{5}x - 1$

34) $y = \frac{5}{4}x + 4$ 35) $y = -\frac{3}{4}x + 5$ 36) $y = -\frac{2}{3}x$ 37) $y = \frac{2}{3}x + \frac{10}{3}$