Name _____ Date _____
Mr. Schlansky Geometry

Parallel and Perpendicular Slopes

What is the slope of the line:

1. Parallel to $y = 3x - 6$?

2. Perpendicular to $y = 3x - 6$?

3. Parallel to $y = -2x + 1$?

4. Perpendicular to $y = -2x + 1$?

5. Parallel to $y = -\frac{2}{3}x - 7$?

6. Perpendicular to $y = -\frac{2}{3}x - 7$?

7. Parallel to $y = \frac{1}{4}x + 3$?

8. Perpendicular to $y = \frac{1}{4}x + 3$?

9. Parallel to $2x + 3y = 12$?

10. Perpendicular to $2x + 3y = 12$?

11. Parallel to $-2x + 5y = 15$?

12. Perpendicular to $-2x + 5y = 15$?

13. What is the slope of a line perpendicular to the line whose equation is $y = -\frac{2}{3}x - 5$?

1) $-\frac{3}{2}$

2) $-\frac{2}{3}$

3) $\frac{2}{3}$

4) $\frac{3}{2}$

14. What is the slope of a line perpendicular to the line whose equation is $y = 3x + 4$?

1) $\frac{1}{3}$

2) $-\frac{1}{3}$

3) 3

4) -3

15. What is the slope of a line parallel to the line whose equation is $2y = -6x + 8$?

1) -3

2) $\frac{1}{6}$

3) $\frac{1}{3}$

4) -6

16. What is the slope of a line that is parallel to the line whose equation is $3x + 4y = 12$?

1) $\frac{3}{4}$

2) $-\frac{3}{4}$

3) $\frac{4}{3}$

4) $-\frac{4}{3}$

17. What is the slope of a line perpendicular to the line whose equation is $5x + 3y = 8$?

1) $\frac{5}{3}$

2) $\frac{3}{5}$

3) $-\frac{3}{5}$

4) $-\frac{5}{3}$

18. What is the equation of a line that is parallel to the line whose equation is $y = 3x - 1$?

1) $y = -\frac{1}{3}x + 2$
3) $y = -3x + 6$
2) $y = \frac{1}{3}x - 7$
4) $y = 3x + 4$

19. What is the equation of a line that is perpendicular to the line whose equation is $y = \frac{1}{2}x + 4$?

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

20. What is the equation of a line that is perpendicular to the line whose equation is $2x + 3y = 6$?

1) $y = -\frac{3}{2}x - 2$
3) $y = -\frac{2}{3}x + 7$
2) $y = \frac{3}{2}x - 5$
4) $y = \frac{2}{3}x + 1$

21. What is the equation of a line that is parallel to the line whose equation is $4x - 3y = 9$?

1) $y = -\frac{3}{4}x + 1$
3) $y = -\frac{4}{3}x + 6$
2) $y = \frac{3}{4}x - 8$
4) $y = \frac{4}{3}x - 7$

22. What is the equation of a line that is parallel to the line whose equation is $y = x + 2$?

1) $x + y = 5$
3) $y - x = -1$
2) $2x + y = -2$
4) $y - 2x = 3$

23. Which equation represents a line perpendicular to the line whose equation is $2x + 3y = 12$?

1) $6y = -4x + 12$
3) $2y = -3x + 6$
2) $2y = 3x + 6$
4) $3y = -2x + 12$

24. Which equation represents a line parallel to the line whose equation is $2y - 5x = 10$?

1) $5y - 2x = 25$
3) $4y - 10x = 12$
2) $5y + 2x = 10$
4) $2y + 10x = 8$

25. The lines $4x + 2y = 8$ and $y + 2x = 4$ are

1) parallel
2) perpendicular
3) the same line
4) neither parallel nor perpendicular

26. The lines $-3y = x + 9$ and $y + 2 = -\frac{1}{3}x$ are

1) parallel
2) perpendicular
3) the same line
4) neither parallel nor perpendicular

27. The lines $2x + 4y = 12$ and $4x - 2y = 12$ are

1) parallel
2) perpendicular
3) the same line
4) neither parallel nor perpendicular

28. The lines $3y + 1 = 6x + 4$ and $2y + 1 = x - 9$ are

1) parallel
2) perpendicular
3) the same line
4) neither parallel nor perpendicular

29. The lines represented by the equations $y + \frac{1}{2}x = 4$ and $3x + 6y = 12$ are

1) the same line
2) parallel
3) perpendicular
4) neither parallel nor perpendicular