Answers without work to check. If you cannot find your mistake then please seek help EARLY! This assignment is worth 4 pts. 1) did you complete it 2) did you show all the work 3) did you correct in pen 4) did you get 75% of the problems correct?

4.3 pg. 191 answers with no work. Check the ones you were supposed to do for your assignment. Ask questions on any in class that you cannot figure out your mistake. Remember odd answers are always in the back of your textbook.

1. parallel

2. $\frac{7}{5}; \frac{7}{5}$ is the negative reciprocal of $-\frac{5}{7}$.

3. lines a and b; They have the same slope.

4. lines b and c; They have the same slope.

5. lines a and c; They have the same slope.

6. none; None of the lines have the same slope.

7. none; None of the lines have the same slope.

8. lines a and b; They have the same slope.

9. $y = 2x + 5$

10. $y = -5x + 7$

11. $y = \frac{1}{3}x - 4$

12. $y = \frac{3}{2}x - 8$

13. None are parallel or perpendicular; None of the lines have the same slope or slopes that are negative reciprocals of each other.

14. Lines a and b are parallel; None are perpendicular; Lines a and b have the same slope and none of the lines have slopes that are negative reciprocals of each other.

15. None are parallel; Lines *b* and *c* are perpendicular; None of the lines have the same slope and the slope of line *b* is the negative reciprocal of the slope of line *c*.

16. Lines *a* and *b* are parallel; None are perpendicular; Lines *a* and *b* have the same slope and none of the lines have slopes that are negative reciprocals of each other.

17. Lines *a* and *b* are parallel; Line *c* is perpendicular to lines *a* and *b*; Lines *a* and *b* have the same slope and the slope of line *c* is the negative reciprocal of the slopes of lines *a* and *b*.

18. None are parallel; Lines *a* and *b* are perpendicular; None of the lines have the same slope and the slope of line *a* is the negative reciprocal of the slope of line *b*.

19. $y = -2x + 24$

20. $y = -\frac{3}{4}x - 4$

21. $y = -\frac{1}{4}x + \frac{9}{4}$

22. $y = \frac{1}{2}x - 3$

23. **a.** $y = -4x + 19$
  b. $y = \frac{1}{4}x + 2$

24. **a.** $y = 3x - 11$
  b. $y = -\frac{1}{3}x - 1$

25. Parallel lines have the same slope, not negative reciprocal slopes; $y - 3 = \frac{1}{4}(x - 1)$; $y - 3 = \frac{1}{4}x - \frac{1}{4}$; $y = \frac{1}{4}x + \frac{11}{4}$

26. Perpendicular lines have negative reciprocal slopes, not just reciprocal slopes; $y - (-5) = -3(x - 4)$; $y + 5 = -3x + 12$; $y = -3x + 7$

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

28. $y = \frac{4}{3}x - \frac{1}{3}$

29. **a.** yes; Opposite sides are parallel.
     b. no; Adjacent sides are not perpendicular.

30. $a = -\frac{2}{3}; a = 6$

31. no; The lines that form the angle are not perpendicular.

32. **a.** yes; Student B paid a greater registration fee.
     b. no; Both graphs have the same slope.

33. never; Perpendicular lines have opposite reciprocal slopes, so one must be positive and the other must be negative.

34. always; The y-axis is a vertical line, and all vertical lines are parallel.

35. sometimes; They are perpendicular when the slopes are negative reciprocals, otherwise they will not be perpendicular.

36. *Sample answer:*
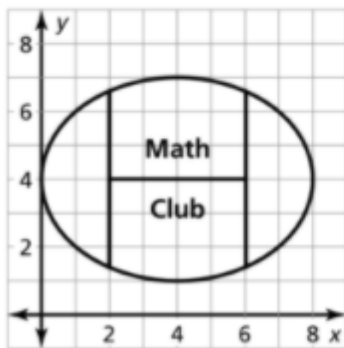
$y = 4; x = 2; x = 6$

37. function; Each input value is paired with exactly one output value.

38. not a function; The input values of -1 and 1 are each paired with more than one output value.