

Parallel & Perpendicular Lines & Scatter Plots

1. Parallel lines ...

- a. Have opposite slopes and do intersect
- b. Have the same slope and do not intersect
- c. Have opposite reciprocal slopes and do not intersect
- d. Have opposite reciprocal slopes and intersect at a right angle

2. Perpendicular lines ...

- a. Have opposite slopes and do intersect
- b. Have the same slope and do not intersect
- c. Have opposite reciprocal slopes and do not intersect
- d. Have opposite reciprocal slopes and intersect at a right angle

3. Describe $y - 2x = 7$ and $y = 2x - 1$.

- a. Parallel
- b. Perpendicular
- c. Neither
- d. Not enough information given

4. Describe $y = 6x - 2$ and $y - 3x = 4$.

- a. Parallel
- b. Perpendicular
- c. Neither
- d. Not enough information given

5. What is the slope of a line that is perpendicular to $y + \frac{1}{2}x = 3$?

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6. What is the slope of a line that is parallel to $y - \frac{1}{4}x = 7$?

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7. Which of the following lines is *not* perpendicular to $\frac{1}{3}x - y = 7$?

- a. $y = -3x$
- b. $-y = 3x + 2$
- c. $3x - y = 8$
- d. $3x + y = 9$

8. Choose the equation of the line that passes through $(-3, 5)$ and is parallel to the graph $y = 2x - 4$.

- a. $y = -\frac{1}{2}x + 5$
- b. $y = -\frac{1}{2}x + 11$
- c. $y = 2x + 5$
- d. $y = 2x + 11$

9. Which line is perpendicular to $y = 4$?

- a. $x = 0$
- b. $y = -4$
- c. $y = 4$
- d. not enough information given

10. Which line is parallel to $x = -3$?

- a. $x = 0$
- b. $y = -4$
- c. $y = 4$
- d. not enough information given

Use the scatter plot to answer questions 11 – 15.

11. Determine what relationship, if any, exists in the data.

- a. Positive correlation
- b. Negative correlation
- c. No correlation
- d. None of the above

12. Use the points $(2, 7)$ and $(7, 2)$ to find the slope of the line of fit for the given data.

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13. Using the points $(2, 7)$ and $(7, 2)$ what is the equation in slope-intercept form of the line of fit for the given data?

- a. $y = -x - 5$
- b. $y = -x + 5$
- c. $y = -x - 9$
- d. $y = -x + 9$

14. Choose the description that describes the data.

- a. The more you floss the more cavities you have.
- b. The more you floss the fewer cavities you have.
- c. The less you floss the fewer cavities you have.
- d. None of the above.

15. Using the line of fit, predict the number of cavities you could have if you floss 4 times a week.

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