

Practice Test - Chapter 4

1. Graph $y = 2x - 3$.

2. **MULTIPLE CHOICE** A popular pizza parlor charges \$15 for a large cheese pizza plus \$1.50 for each additional topping. Write an equation in slope-intercept form for the total cost C of a pizza with t toppings.

- A $C = 15t + 1.50$
 B $C = 16.50t$
 C $C = 15 + 1.50t$
 D $C = 1.50t - 15$

Write an equation of a line in slope-intercept form that passes through the given point and has the given slope.

3. $(-4, 2)$; slope -3

4. $(3, -5)$; slope $\frac{2}{3}$

Write an equation of the line in slope-intercept form that passes through the given points.

5. $(1, 4)$, $(3, 10)$

6. $(2, 5)$, $(-2, 8)$

7. $(0, 4)$, $(-3, 0)$

8. $(7, -1)$, $(9, -4)$

9. **PAINTING** The data in the table show the size of a room in square feet and the time it takes to paint the room in minutes.

Room Size	100	150	200	400	500
Painting Time	160	220	270	500	680

- a. Use the points $(100, 160)$ and $(500, 680)$ to write an equation in slope-intercept form.
 b. Predict the amount of time required to paint a room measuring 750 square feet.

10. **SALARY** The table shows the relationship between years of experience and teacher salary.

Years Experience	1	5	10	15	20
Salary (thousands of dollars)	28	31	42	49	64

- a. Write an equation for the best-fit line.
 b. Find the correlation coefficient and explain what it tells us about the relationship between experience and teacher salary.

Write an equation in slope-intercept form for the line that passes through the given point and is parallel to the graph of each equation.

11. $(2, -3)$, $y = 4x - 9$

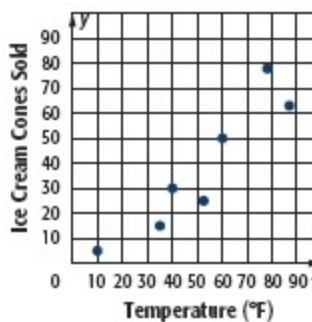
12. $(-5, 1)$, $y = -3x + 2$

Write an equation in slope-intercept form for the line that passes through the given point and is perpendicular to the graph of the equation.

13. $(1, 4)$, $y = -2x + 5$

14. $(-3, 6)$, $y = \frac{1}{4}x + 2$

15. **MULTIPLE CHOICE** The graph shows the relationship between outside temperature and daily ice cream cone sales. What type of correlation is shown?



- F positive correlation
 G negative correlation
 H no correlation
 J not enough information

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16. **ADOPTION** The table shows the number of children from Ethiopia adopted by U.S. citizens.

Years Since 2000	5	7	9	10	11
Number of Children	442	1254	2275	2511	1732

- Write the slope-intercept form of the equation for the line of fit.
- Predict the number of children from Ethiopia who will be adopted in 2025.

Find the inverse of each function.

17. $f(x) = -5x - 30$

18. $f(x) = 4x + 10$

19. $f(x) = \frac{1}{6}x - 2$

20. $f(x) = \frac{3}{4}x + 12$