

Name: _____ Date: _____ 2nd Nine Weeks Review

Find the slope of the line through each pair of points.

1) (19, -16), (-7, -15)

2) (1, -19), (-2, -7)

Find the slope of each line.

3) $8x + 3y = -9$

4) $-30 + 10y = -2x$

5) **Graph.** $7x + y = 5$

6) **Graph.** $y = -6x + 3$

Write the standard form of the equation of the line through the given points.

7) through: (-3, 2) and (0, -1)

8) through: (0, 4) and (-1, -1)

Write the standard form of the equation of the line described.

9) through: (-2, 4), parallel to $y = -\frac{3}{2}x + 3$

Write the slope-intercept form of the equation of each line.

10) $3x - 2y = -16$

11) $6x + 5y = -15$

Write the point-slope form of the equation of the line described.

12) through: (4, 2), parallel to $y = -\frac{3}{4}x - 5$

Solve the system of equations.

13) $-3x - 3y = 3$; $y = -5x - 17$

14) $-3x + 3y = 4$; $-x + y = 3$

15) The school that Stefan goes to is selling tickets to a choral performance. On the first day of ticket sales the school sold 3 senior citizen tickets and 1 child ticket for a total of \$38. The school took in \$52 on the second day by selling 3 senior citizen tickets and 2 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

16) The sum of the digits of a certain two-digit number is 7. Reversing its digits increases the number by 9. What is the number?

17) A boat traveled 336 miles downstream and back. The trip downstream took 12 hours. The trip back took 14 hours. What is the speed of the boat in still water? What is the speed of the current?

18) Emily mixed together 9 gal. of Brand A fruit drink and 8 gal. of Brand B fruit drink which contains 48% fruit juice. Find the percent of fruit juice in Brand A if the mixture contained 30% fruit juice.

19) **Graph this system of inequalities.** $x \leq -3$ and $y < \frac{5}{3}x + 2$

20) *Simplify.*

$$(2x^0y^2)^{-3} \cdot 2yx^3$$

21) *Simplify.*

$$\frac{(2pm^{-1}q^0)^{-4} \cdot 2m^{-1}p^3}{2pq^2}$$

22) *Simplify.*

$$\frac{(2x^3z^2)^3}{x^3y^4z^2 \cdot x^{-4}z^3}$$

23) *Multiply. Write your answer in Scientific Notation.*

$$(3.48 \times 10^3)(9.8 \times 10^4)$$

24) *Divide. Write your answer in Scientific Notation.*

$$\frac{1.62 \times 10^{-6}}{5.3 \times 10^6}$$

25) *Simplify. Write your answer in Scientific Notation.*

$$(2.4 \times 10^{-5})^4$$

