

1. Write an explicit formula for an arithmetic sequence with $u_0 = 11$ and a common difference of 9.
2. Write a recursive formula for the sequence 8, 2, -4, -10, ...

With the given information, find the equation of the line in point-slope form.

3. slope $\frac{3}{4}$, passes through $(-4, 10)$
4. passes through $(2, 6)$ and $(4, 12)$
5. passes through $(0, 7)$ and $(5, 0)$
6. parallel to $2x + 4y = 5$, passes through $(9, -2)$
7. perpendicular to $5x - 3y = 7$, passes through $(-12, 7)$

8A. Write the equation of the line in slope-intercept form that passes through $(-5, 7)$ and $(1, 3)$.

8B. Find the value of x for which the slope of the line through $(x, 3)$ and $(5, 7)$ is $\frac{5}{4}$.

Solve each system of equations. (Remember there are 3 methods to solve a system – you're responsible for knowing how to use each one and when each method might be a better choice.)

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|-----|-------------------|-----|----------------|-----|---------------|-----|------------------|
| 9. | $2x + 5y = 10$ | 10. | $6x - 5y = 0$ | 11. | $3x - 4y = 8$ | 12. | $5x - 8y = 8$ |
| | $x - 3y = -6$ | | $x - y = -1$ | | $y = x - 1$ | | $-10x + 4y = -7$ |
| 13. | $0.5x + 1.5y = 5$ | 14. | $6m + 3n = 15$ | | | | |
| | $x + y = -10$ | | $n = -2m + 5$ | | | | |

A farmer was analyzing the number of bales of hay he has grown each year since 1990.

15. What is the independent variable? 16. What is the dependent variable?

Evaluate the equation for the indicated variable.

17. $b = -12 + \frac{2}{3}a$ for $a = 21$ 18. $n = \frac{4}{5}p + 17$ for $p = 25$

Solve for x .

19. $8 - 3(x - 2) = 5 + 6x$ 20. $3.8x - 16.2 = 12 + 2.8(x + 3)$ 21. $2x - 7y = 35$ 22. $3y - 5x = 21$

23. The admission fee to a small fair is \$1.50 for children and \$4.00 for adults. On a certain day, 2200 people entered the fair and a total of \$5050 was collected. How many children and how many adults went to the fair?

24. A landscaping company placed two orders with a nursery. The first order was for 13 bushes and 4 trees for a total of \$487. The second order was for 6 bushes and 2 trees for a total of \$232. Since the bills do not list the price per item, how much did each bush and each tree cost?

25. Find the X and Y intercepts of $13x - 15y = 100$.