

ALGEBRA 1
Summer Packet 2022

Evaluate each expression.

1) $6 \cdot 6 - 3$

2) $6 \cdot 3 + 6$

3) $\frac{4 \cdot 2}{4} + 5$

4) $1 + 3 - 2 + 1$

5) $2 \cdot 4(5 - 4 + 3)$

6) $6 \cdot 6 + \frac{10}{6 - 1}$

7) $2(6 \cdot 5 - 3 \cdot 2) - 1$

8) $6 - \frac{1 + 3}{5 - 3} - 2$

Write each as an algebraic expression.

9) the difference of 23 and 18

10) z cubed

11) the difference of x and 4

12) 45 divided by n

13) 9 more than n

14) half of 20

15) 22 divided by 2

16) the sum of b and 11

Combine like terms. If they can't be combine, indicate so.

17) $2x + 8x$

18) $6 + 5r + r$

19) $-8x + 7x$

20) $1 + 8b - 3$

21) $-8b - b$

22) $-n + 10n$

Simplify each expression using the distributive property.

23) $-9(1 + 7n)$

24) $7(x + 4)$

$$25) 3(x + 7)$$

$$26) -(4v + 7)$$

$$27) 7(7p + 6)$$

$$28) -4(3k + 6)$$

Solve each equation.

$$29) 7 = \frac{n}{3}$$

$$30) b - 8 = -14$$

$$31) -72 = 8x$$

$$32) 19 = 13 + n$$

$$33) -16 + x = -6$$

$$34) 3 + v = -1$$

$$35) 18 - v = 20$$

$$36) 4 + x = 19$$

$$37) \frac{x}{3} - 4 = -1$$

$$38) -4(r + 9) = -76$$

$$39) -28 = 2 - 2v$$

$$40) -2n + 7 = 37$$

$$41) -4 + 9x = 50$$

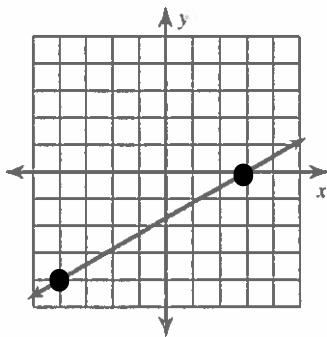
$$42) -7 + \frac{a}{9} = -6$$

$$43) 43 = 8m + 3$$

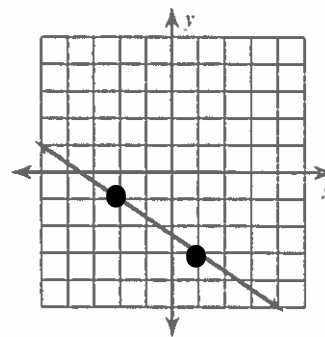
$$44) 6(r - 2) = 78$$

Find the slope of each line.

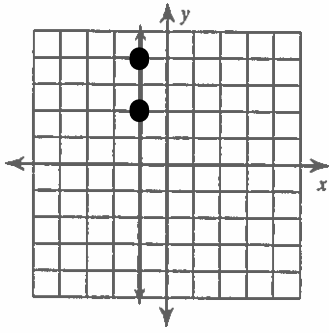
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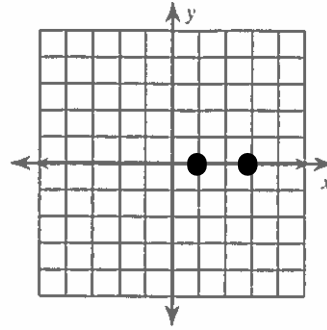
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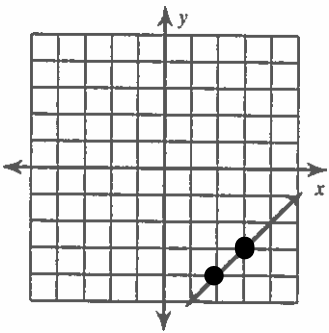
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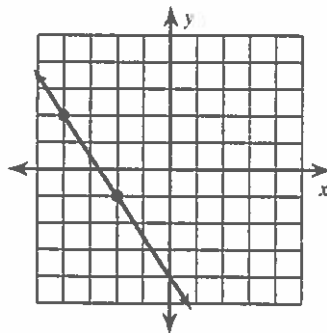
48)



49)



50)



$$\frac{y_2 - y_1}{x_2 - x_1} \quad \text{*change in y over change in x}$$

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

51) $(3, 6), (-6, 12)$

52) $(15, 5), (3, 5)$

53) $(-9, 18), (-19, -9)$

54) $(19, -3), (12, 15)$