

## Evaluating Variable Expressions

Evaluate each using the values given.

1)  $n^2 - m$ ; use  $m = 7$ , and  $n = 8$

2)  $8(x - y)$ ; use  $x = 5$ , and  $y = 2$

3)  $yx \div 2$ ; use  $x = 7$ , and  $y = 2$

4)  $m - n \div 4$ ; use  $m = 5$ , and  $n = 8$

5)  $x - y + 6$ ; use  $x = 6$ , and  $y = 1$

6)  $z + x^3$ ; use  $x = 1$ , and  $z = 19$

7)  $y + yx$ ; use  $x = 15$ , and  $y = 8$

8)  $q \div 6 + p$ ; use  $p = 10$ , and  $q = 12$

9)  $x + 8 - y$ ; use  $x = 20$ , and  $y = 17$

10)  $15 - (m + p)$ ; use  $m = 3$ , and  $p = 10$

11)  $10 - x + y \div 2$ ; use  $x = 5$ , and  $y = 2$

12)  $p - 2 + qp$ ; use  $p = 7$ , and  $q = 4$

13)  $zy + 4y$ ; use  $y = 5$ , and  $z = 2$

14)  $b(a + b) + a$ ; use  $a = 9$ , and  $b = 4$

15)  $p^2 \div 4 - m$ ; use  $m = 3$ , and  $p = 4$

16)  $x(y \div 3)^2$ ; use  $x = 4$ , and  $y = 9$

17)  $4 + m + n - m$ ; use  $m = 4$ , and  $n = 9$

18)  $qp + q - p$ ; use  $p = 7$ , and  $q = 3$

19)  $mn \div 6 + 10$ ; use  $m = 7$ , and  $n = 6$

20)  $h + j(j - h)$ ; use  $h = 2$ , and  $j = 6$

21)  $(b - 1)^2 + a^2$ ; use  $a = 6$ , and  $b = 1$

22)  $y(x - (9 - 4y))$ ; use  $x = 4$ , and  $y = 2$

23)  $x - (x - (x - y^3))$ ; use  $x = 9$ , and  $y = 1$

24)  $j(h - 9)^3 + 2$ ; use  $h = 9$ , and  $j = 8$

## Simplifying Variable Expressions

Simplify each expression.

1)  $-3p + 6p$

2)  $b - 3 + 6 - 2b$

3)  $7x - x$

4)  $7p - 10p$

5)  $-10v + 6v$

6)  $-9r + 10r$

7)  $9 + 5r - 9r$

8)  $1 - 3v + 10$

9)  $5n + 9n$

10)  $4b + 6 - 4$

11)  $35n - 1 + 46$

12)  $-33v - 49v$

13)  $30n + 8n$

14)  $7x + 31x$

15)  $10x + 36 - 38x - 47$

16)  $-2(7 - n) + 4$

17)  $-8(-5b + 7) + 5b$

18)  $-4p - (1 - 6p)$

19)  $4 - 5(-4n + 3)$

20)  $-7(k - 8) + 2k$

21)  $1 + 7(1 - 3b)$

22)  $3 - 8(7 - 5n)$

## Multi-Step Equations

Solve each equation.

1)  $6a + 5a = -11$

2)  $-6n - 2n = 16$

3)  $4x + 6 + 3 = 17$

4)  $0 = -5n - 2n$

5)  $6r - 1 + 6r = 11$

6)  $r + 11 + 8r = 29$

7)  $-10 = -14v + 14v$

8)  $-10p + 9p = 12$

9)  $42 = 8m + 13m$

10)  $a - 2 + 3 = -2$

11)  $18 = 3(3x - 6)$

12)  $30 = -5(6n + 6)$

$$13) 37 = -3 + 5(x + 6)$$

$$14) -13 = 5(1 + 4m) - 2m$$

$$15) 4(-x + 4) = 12$$

$$16) -2 = -(n - 8)$$

$$17) -6(1 - 5v) = 54$$

$$18) 8 = 8v - 4(v + 8)$$

$$19) 10(1 + 3b) = -20$$

$$20) -5n - 8(1 + 7n) = -8$$

$$21) 8(4k - 4) = -5k - 32$$

$$22) -8(-8x - 6) = -6x - 22$$

$$23) 8(1 + 5x) + 5 = 13 + 5x$$

$$24) -11 - 5a = 6(5a + 4)$$

## Two-Step Equations With Integers

Solve each equation.

1)  $\frac{r}{10} + 4 = 5$

2)  $\frac{n}{2} + 5 = 3$

3)  $3p - 2 = -29$

4)  $1 - r = -5$

5)  $\frac{k - 10}{2} = -7$

6)  $\frac{n - 5}{2} = 5$

7)  $-9 + \frac{n}{4} = -7$

8)  $\frac{9 + m}{3} = 2$

9)  $\frac{-5 + x}{22} = -1$

10)  $4n - 9 = -9$

11)  $\frac{x + 9}{2} = 3$

12)  $\frac{-12 + x}{11} = -3$

13)  $\frac{-4 + x}{2} = 6$

14)  $-5 + \frac{n}{3} = 0$

$$15) \frac{p}{4} + 8 = 7$$

$$16) 9 + \frac{n}{4} = 15$$

$$17) 6 + \frac{x}{2} = 4$$

$$18) \frac{b+11}{3} = -2$$

$$19) \frac{a-10}{3} = -4$$

$$20) -12r + 4 = 100$$

$$21) \frac{m}{16} - 9 = -8$$

$$22) -7 + 4r = -15$$

$$23) \frac{m-13}{2} = -8$$

$$24) -5x + 13 = -17$$

$$25) \frac{k+10}{-2} = 5$$

$$26) \frac{p+8}{-2} = 10$$

$$27) -14r - 19 = 303$$

$$28) \frac{x}{-4} - 5 = -8$$

## Solving Two-Step Inequalities

Solve each inequality and graph its solution.

1)  $\frac{n}{3} + 2 > 0$



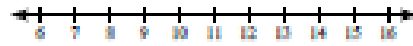
2)  $\frac{p}{9} - 1 \leq -2$



3)  $\frac{x}{1} + 5 > 5$



4)  $\frac{1+m}{9} \geq 1$



5)  $-2r - 2 \leq 4$



6)  $8x + 2 \leq 138$



7)  $3 + \frac{b}{9} < 4$



8)  $9 + \frac{n}{2} > 16$





$$9) -7v + 5 \geq -79$$



$$10) \frac{n+3}{2} > -2$$



$$11) 4 > \frac{a+1}{2}$$



$$12) -2 + \frac{x}{2} > 6$$



$$13) 60 > 5 - 5n$$



$$14) \frac{x+1}{2} \geq -4$$



$$15) 6 \leq 5 + \frac{p}{20}$$



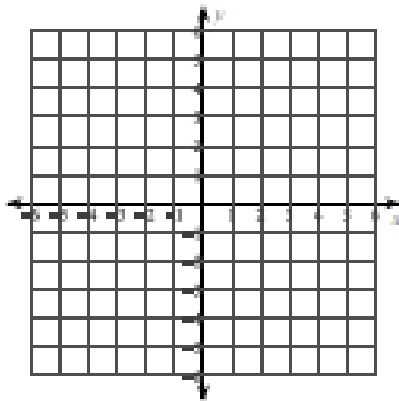
$$16) -18 + \frac{k}{3} \leq -26$$



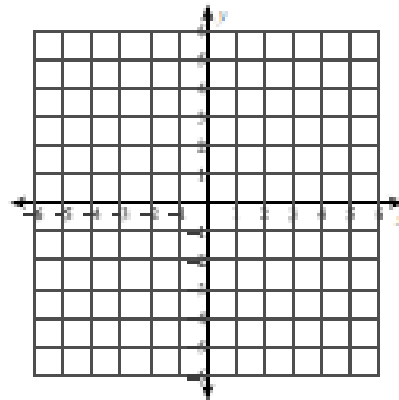
## Graphing Lines

Sketch the graph of each line.

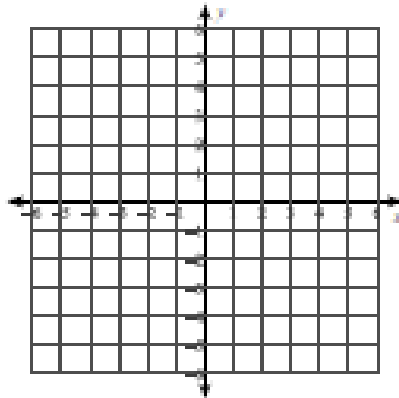
1)  $y = \frac{7}{2}x - 2$



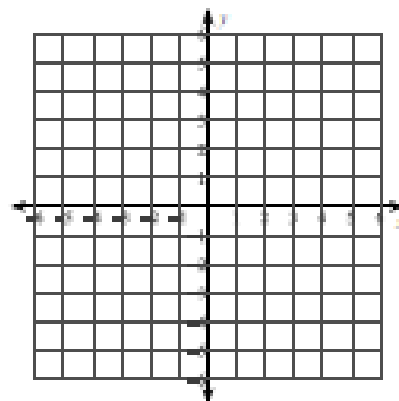
2)  $y = -6x + 3$



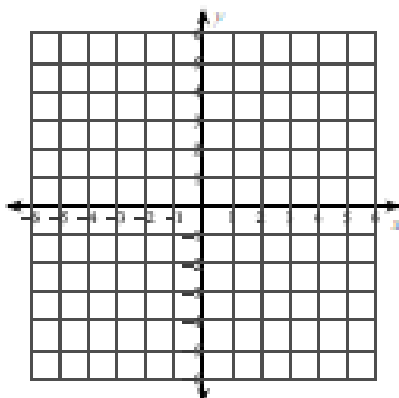
3)  $y = -5$



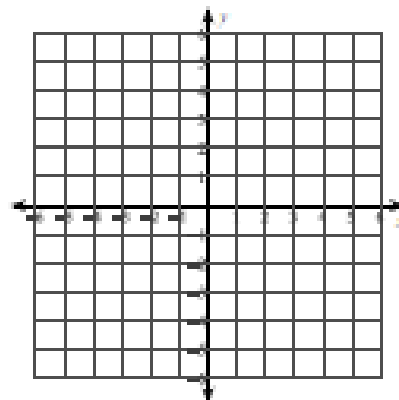
4)  $y = \frac{6}{5}x + 1$



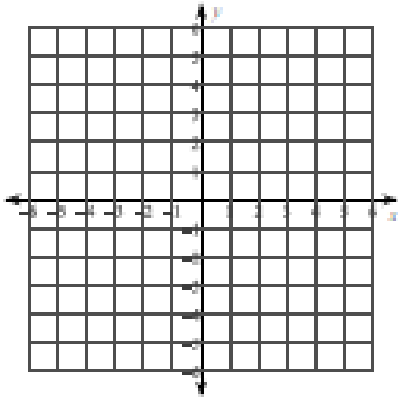
5)  $y = \frac{1}{4}x + 2$



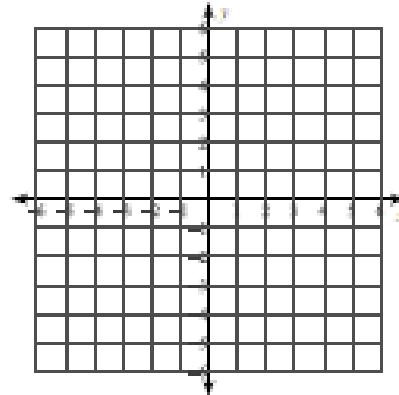
6)  $x = 5$



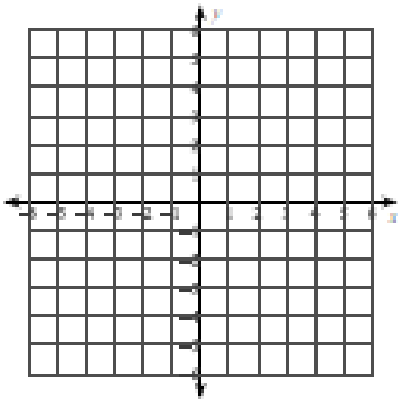
7)  $y = \frac{5}{3}x$



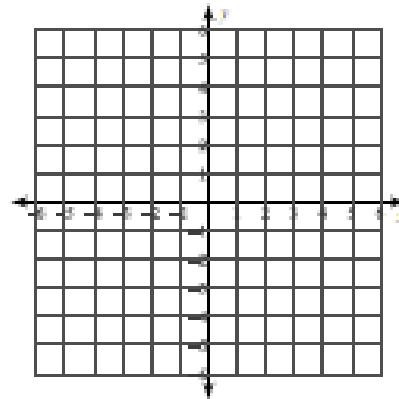
8)  $x = 0$



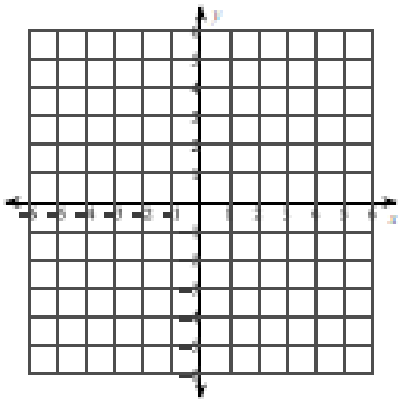
9)  $y = -\frac{1}{3}x + 3$



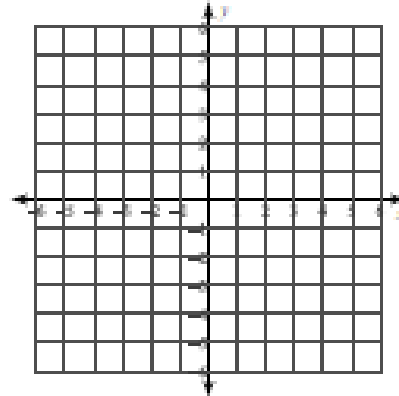
10)  $y = \frac{1}{5}x - 4$



11)  $y = \frac{1}{2}x - 2$



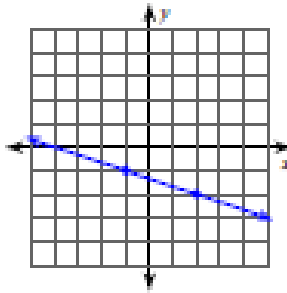
12)  $y = 2x + 5$



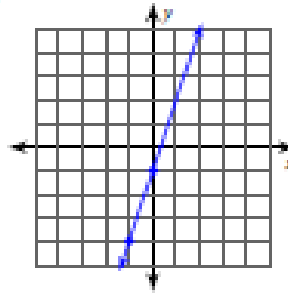
# Slope

Find the slope of each line.

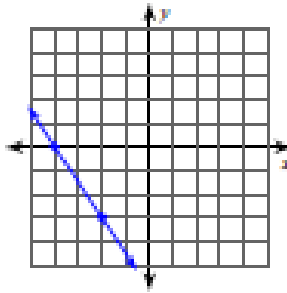
1)



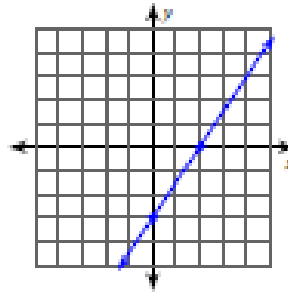
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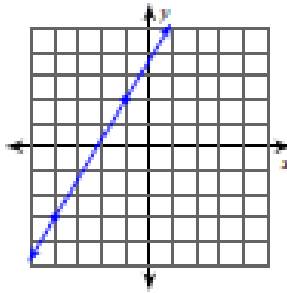
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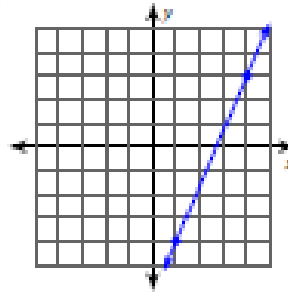
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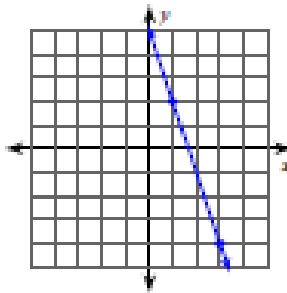
5)



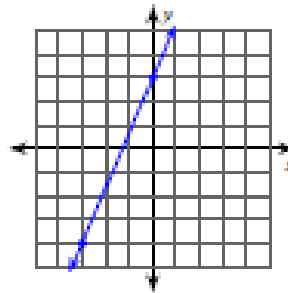
6)



7)



8)



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

9)  $(8, 10), (-7, 14)$

10)  $(-3, 1), (-17, 2)$

11)  $(-20, -4), (-12, -10)$

12)  $(-12, -5), (0, -8)$

13)  $(-19, -6), (15, 16)$

14)  $(-6, 9), (7, -9)$

15)  $(-18, -20), (-18, -15)$

16)  $(12, -18), (11, 12)$

Find the slope of each line.

17)  $y = -5x - 1$

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

19)  $y = -\frac{1}{5}x - 4$

20)  $x = 1$

21)  $y = \frac{1}{4}x + 1$

22)  $y = -\frac{2}{3}x - 1$

23)  $y = -x + 2$

24)  $y = -x - 1$

25)  $2x + 3y = 9$

26)  $5x + 2y = 6$

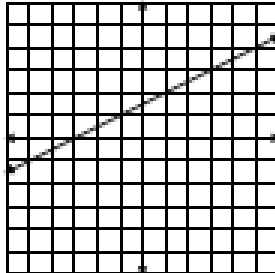
# Identifying Slope Types

Name: \_\_\_\_\_ Date: \_\_\_\_\_



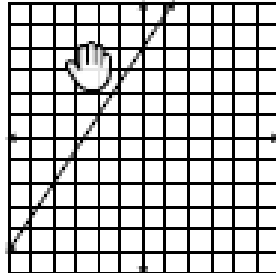
Write the type of slope in each graph: *positive, negative, zero, or undefined.*

(1)



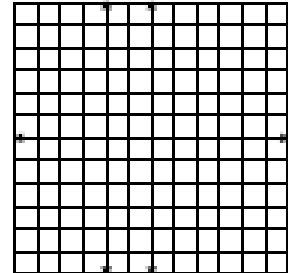
Type: \_\_\_\_\_

(2)



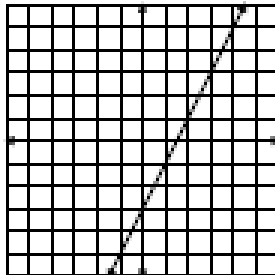
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(3)



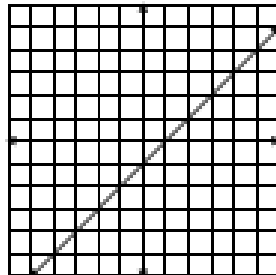
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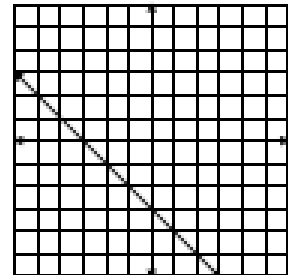
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(5)



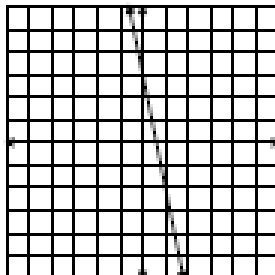
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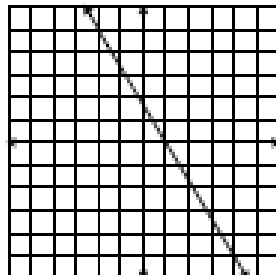
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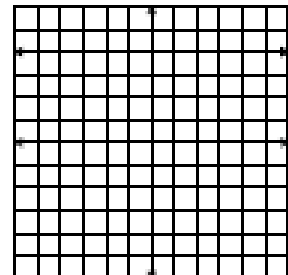
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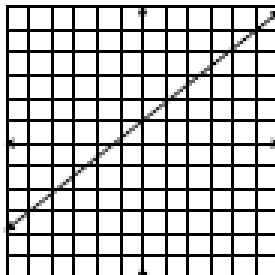
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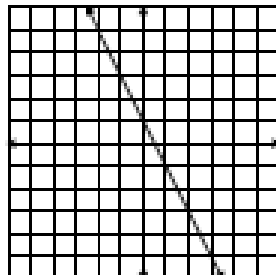
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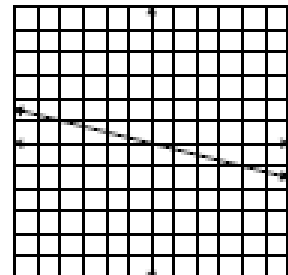
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