Name_____

Finding Slope From an Equation

Date_____ Period____

Find the slope of each line.

1) $y = -\dfrac{5}{2}x - 5$

$-\dfrac{5}{2}$

2) $y = -\dfrac{4}{3}x - 1$

$-\dfrac{4}{3}$

3) $y = -x + 3$

-1

4) $y = -4x - 1$

-4

5) $2x - y = 1$

2

6) $x + 2y = -8$

$-\dfrac{1}{2}$

7) $8x + 3y = -9$

$-\dfrac{8}{3}$

8) $4x + 5y = -10$

$-\dfrac{4}{5}$

9) $x - y = -2$

1

10) $4x - 3y = 9$

$\dfrac{4}{3}$

Name_____

Finding Slope From Two Points

Date_____ Period_____

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

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

$-\dfrac{1}{26}$

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

-4

3) $(-4, 7), (-6, -4)$

$\dfrac{11}{2}$

4) $(20, 8), (9, 16)$

$-\dfrac{8}{11}$

5) $(17, -13), (17, 8)$

Undefined

6) $(19, 3), (20, 3)$

0

7) $(3, 0), (-11, -15)$

$\dfrac{15}{14}$

8) $(19, -2), (-11, 10)$

$-\dfrac{2}{5}$

9) $(6, -10), (-15, 15)$

$-\dfrac{25}{21}$

10) $(12, -18), (-15, -18)$

0

11) $(3, -20), (5, 8)$

14

12) $(15, 8), (-17, 9)$

$-\dfrac{1}{32}$

13) $(-19, 12), (-9, 1)$

$-\dfrac{11}{10}$

14) $(12, 2), (-7, 5)$
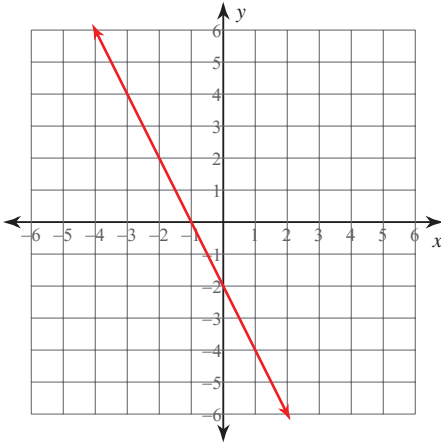
$-\dfrac{3}{19}$

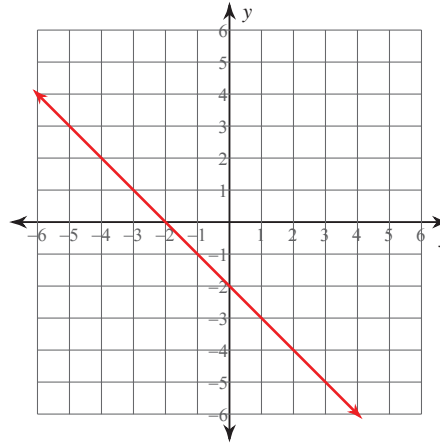15) $(6, -12), (15, -3)$

1

16) $(9, 3), (19, -17)$

-2

Name_____

Review of Linear Equations

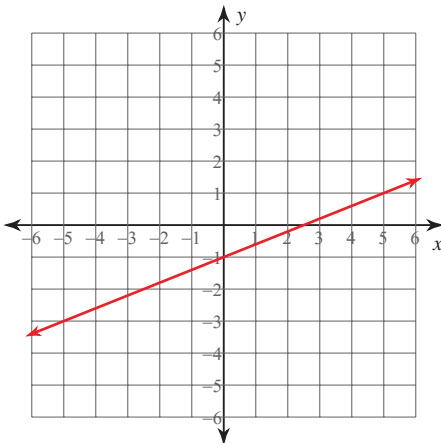Date_____ Period____

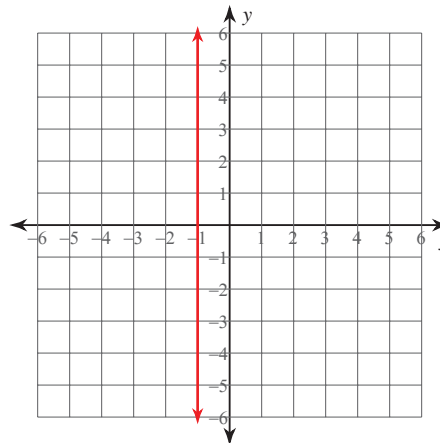**Sketch the graph of each line.**
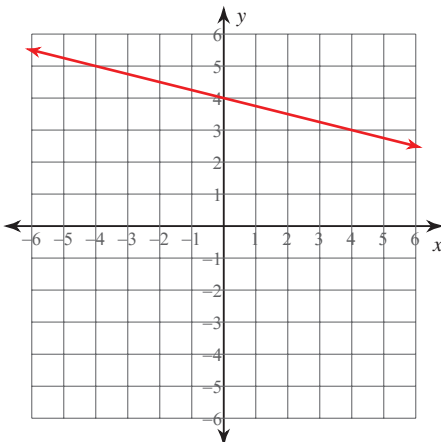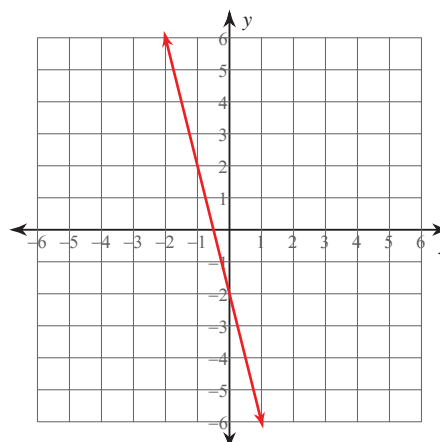
1) $y = -2x - 2$

2) $y = -x - 2$

3) $2x - 5y = 5$

4) $x = -1$

5) $32 - 2x = 8y$

6) $0 = x + \dfrac{1}{4}y + \dfrac{1}{2}$

Write the standard form of the equation of each line given the slope and y-intercept.

7) Slope $= -\dfrac{3}{5}$, y-intercept $= 5$

$3x + 5y = 25$

8) Slope $= 9$, y-intercept $= 4$

$9x - y = -4$

Write the standard form of the equation of each line.

9) $y = -\dfrac{7}{5}x + 1$

$7x + 5y = 5$

10) $y = \dfrac{3}{2}x + 5$

$3x - 2y = -10$

11) $y + 4 = -7(x - 1)$

$7x + y = 3$

12) $y + 1 = -(x + 3)$

$x + y = -4$

13) $-10x - y = -5$

$10x + y = 5$

14) $-4 - 2y = -x$

$x - 2y = 4$

Write the standard form of the equation of the line through the given point with the given slope.

15) through: $(4, -2)$, slope $= -1$

$x + y = 2$

16) through: $(-2, 4)$, slope $= -\dfrac{1}{7}$

$x + 7y = 26$

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

17) through: $(-3, 2)$ and $(0, -1)$

$x + y = -1$

18) through: $(0, 4)$ and $(-1, -1)$

$5x - y = -4$

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

19) through: $(2, 0)$, parallel to $y = \dfrac{2}{3}x$

$2x - 3y = 4$

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

$3x + 2y = 2$

21) through: $(2, 4)$, perp. to $y = -\dfrac{2}{7}x - 5$

$7x - 2y = 6$

22) through: $(5, 0)$, perp. to $y = -x + 5$

$x - y = 5$

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Word Problems

1) For babysitting, Nicole charges a flat fee of $3, plus $5 per hour. Write an equation for the cost, C, after h hours of babysitting. What do you think the slope and the y-intercept represent? How much money will she make if she baby-sits 5 hours?

   $C = 3 + 5h$

   Slope is the rate charged per hour

   y-intercept is the initial fee

   $C = 3 + 5(5)$

   $= \$28$

2) A plumber charges $25 for a service call plus $50 per hour of service. Write an equation in slope-intercept form for the cost, C, after h hours of service. What will be the total cost for 8 hours of work? 10 hours of work?

   $C = 25 + 50h$

   $C = 25 + 50(8)$
   $= 25 + 400$
   $= \$425$

   $C = 25 + 50(10)$
   $= 25 + 500$
   $= \$525$

3) A canoe rental service charges a $20 transportation fee and $30 dollars an hour to rent a canoe. Write and graph an equation representing the cost, y, of renting a canoe for x hours. What is the cost of renting the canoe for 6 hours?

   $y = 20 + 30x$

   $y = 20 + 30(6)$

   $y = 20 + 180$

   $y = \$200$

4) A caterer charges $120 to cater a party for 15 people and $200 for 25 people. Assume that the cost, *y,* is a linear function of the number of *x* people. Write an equation in slope-intercept form for this function. What does the slope represent? How much would a party for 40 people cost?

$y = mx + b$

$m = \dfrac{200 - 120 \ ]}{25 - 15}$

$m = 80/10$

$m = 8$

$200 = (8)(25) + b$

$b = 0$

$y = 8x$

$y = 8(40)$

$y = \$320$

5) An attorney charges a fixed fee on $250 for an initial meeting and $150 per hour for all hours worked after that. Write an equation in slope-intercept form. Find the charge for 26 hours of work.

$y = 150x + 250$

$y = 150(26) + 250$

$y = \$4150$