Kuta Software - Infinite Algebra 1 Name_____

Writing Linear Equations

Date_____ Period____

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

1) $3x - 2y = -16$ $(y = mx + b)$

2) $13x - 11y = -12$

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

4) $x - 3y = 6$

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

6) $4x - y = 1$

7) $11x - 4y = 32$

8) $11x - 8y = -48$

point - slope

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

9) through: (1, 2), slope = 7

10) through: (3, −1), slope = −1

11) through: (−2, 5), slope = −4

12) through: (3, 5), slope = $\frac{5}{3}$

13) through: (2, –4), slope = –1

14) through: (2, 5), slope = undefined

15) through: (3, 1), slope = $\frac{1}{2}$

16) through: (–1, 2), slope = 2

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

$y = mx + b$

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

Slope of $-\frac{3}{4}$

18) through: (–3, –3), parallel to $y = \frac{7}{3}x - 3$

Slope of $\frac{7}{3}$

19) through: (–4, 0), parallel to $y = \frac{3}{4}x + 2$

Slope of $\frac{3}{4}$

20) through: (–1, 4), parallel to $y = -5x + 3$

Slope of -5

21) through: (2, 0), parallel to $y = \frac{1}{3}x - 5$

Slope of $\frac{1}{3}$

22) through: (4, –4), parallel to $y = -x + 3$

Slope of -1

23) through: (–2, 4), parallel to $y = -\frac{5}{2}x + 5$

Slope of $-\frac{5}{2}$

24) through: (–4, –1), parallel to $y = -\frac{1}{2}x + 1$

Slope of $-\frac{1}{2}$

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Name_____

Writing Linear Equations

Date_____ Period____

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

1) $3x - 2y = -16$

$y = \frac{3}{2}x + 8$

2) $13x - 11y = -12$

$y = \frac{13}{11}x + \frac{12}{11}$

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

$y = \frac{9}{7}x + 1$

4) $x - 3y = 6$

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

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

$y = -\frac{6}{5}x - 3$

6) $4x - y = 1$

$y = 4x - 1$

7) $11x - 4y = 32$

$y = \frac{11}{4}x - 8$

8) $11x - 8y = -48$

$y = \frac{11}{8}x + 6$

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

9) through: (1, 2), slope = 7

$y - 2 = 7(x - 1)$

10) through: (3, −1), slope = −1

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

11) through: (−2, 5), slope = −4

$y - 5 = -4(x + 2)$

12) through: (3, 5), slope = $\frac{5}{3}$

$y - 5 = \frac{5}{3}(x - 3)$

13) through: (2, –4), slope = –1

$y + 4 = -(x - 2)$

14) through: (2, 5), slope = undefined

$x = 2$

15) through: (3, 1), slope = $\frac{1}{2}$

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

16) through: (–1, 2), slope = 2

$y - 2 = 2(x + 1)$

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

$y = mx + b$

17) through: (4, 2), ~~parallel to $y = \frac{3}{4}x + 5$~~

$m = -\frac{3}{4}$

$y - 2 = -\frac{3}{4}(x - 4)$

$y - 2 = -\frac{3}{4}x + 3$

$+2 \quad +2$

$y = -\frac{3}{4}x + 5$

18) through: (–3, –3), ~~parallel to $y = \frac{7}{3}x + 3$~~

$m = \frac{7}{3}$

$y + 3 = \frac{7}{3}(x + 3)$

$y + 3 = \frac{7}{3}x + 7$

$-3 \quad -3$

$y = \frac{7}{3}x + 4$

19) through: (–4, 0), ~~parallel to $y = \frac{3}{4}x + 2$~~

$m = \frac{3}{4}$

$y = \frac{3}{4}(x + 4)$

$y = \frac{3}{4}x + 3$

20) through: (–1, 4), ~~parallel to $y = -5x + 2$~~

$m = -5$

$y - 4 = -5(x + 1)$

$y - 4 = -5x - 5$

$+4 \quad +4$

$y = -5x - 1$

21) through: (2, 0), ~~parallel to $y = \frac{1}{3}x + 3$~~

$m = \frac{1}{3}$

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

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

22) through: (4, –4), ~~parallel to $y = x - 4$~~

$m = -1$

$y + 4 = -(x - 4)$

$y + 4 = -x + 4$

$-4 \quad -4$

$y = -x$

23) through: (–2, 4), ~~parallel to $y = \frac{5}{2}x + 5$~~

$m = -\frac{5}{2}$

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

$y - 4 = -\frac{5}{2}x - 5$

$+4 \quad +4$

$y = -\frac{5}{2}x - 1$

24) through: (–4, –1), ~~parallel to $y = \frac{1}{2}x + 1$~~

$m = -\frac{1}{2}$

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

$y + 1 = -\frac{1}{2}x - 2$

$-1 \quad -1$

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