

## Chapter 6 – Writing Equations of Lines

If the problem has an ordered pair, you must check your equation ANSWER!

### Writing Equations HW #1 – Wednesday, December 5<sup>th</sup> (Chapter 6 Section 4)

Transform the equation into *standard form*.

- |                           |               |                             |                 |
|---------------------------|---------------|-----------------------------|-----------------|
| 1) $y = 3x + 5$           | $3x - y = -5$ | 4) $y = -\frac{7}{8}x - 10$ | $7x + 8y = -80$ |
| 2) $y = \frac{1}{4}x - 7$ | $x - 4y = 28$ | 5) $y = 2x - 8$             | $2x - y = 8$    |
| 3) $y = -x + 9$           | $x + y = 9$   | 6) $y = \frac{1}{2}x - 1$   | $x - 2y = 2$    |

Write an equation in *slope-intercept form*.

- |                                   |                        |   |                 |
|-----------------------------------|------------------------|---|-----------------|
| 7) $m = -3$ and $b = -8$          | $y = -3x - 8$          | 12) $m = \frac{1}{2}$ and $b = 3$           | $x - 2y = -6$   |
| 8) $m = \frac{3}{5}$ and $b = -3$ | $y = \frac{3}{5}x - 3$ | 13) $m = -7$ and $b = -\frac{1}{8}$         | $56x + 8y = -1$ |
| 9) $b = 6$ and $m = \frac{7}{8}$  | $y = \frac{7}{8}x + 6$ | 14) $m = -1$ and $b = 10$                   | $x + y = 10$    |
| 10) $m = 1$ and $b = -5$          | $y = x - 5$            | 15) $m = \frac{1}{5}$ and $b = -7$          | $4x - 5y = 35$  |
| 11) $b = 3$ and $m = \frac{3}{4}$ | $y = \frac{3}{4}x + 3$ | 16) $m = \frac{2}{3}$ and $b = \frac{1}{6}$ | $4x - 6y = -1$  |

### Writing Equations HW #2 – Thursday, December 6<sup>th</sup> (Chapter 6 Section 4 – Must Check)

Write an equation in *slope-intercept form*.

- |  |                                  |                                       |                |
|--|----------------------------------|---------------------------------------|----------------|
| 17) $m = \frac{7}{2}$ and $(-4, -20)$  | $y = \frac{7}{2}x - 6$           | 22) $m = \frac{2}{5}$ and $(0, -6)$   | $2x - 5y = 30$ |
| 18) $m = \frac{1}{5}$ and $(0, -6)$    | $y = \frac{1}{5}x - 6$           | 23) $m = \frac{1}{2}$ and $(8, 12)$   | $x - 2y = -16$ |
| 19) $m = -\frac{4}{3}$ and $(-12, 20)$ | $y = -\frac{4}{3}x + 4$          | 24) $m = -3$ and $(-2, 0)$            | $3x + y = -6$  |
| 20) $m = -10$ and $(2, -23)$           | $y = -10x - 3$                   | 25) $m = \frac{1}{5}$ and $(-18, -2)$ | $x - 3y = -12$ |
| 21) $m = \frac{3}{8}$ and $(11, 4)$    | $y = \frac{3}{8}x - \frac{1}{8}$ | 26) $m = -4$ and $(-2, 19)$           | $4x + y = 11$  |

Write an equation in *standard form*.

### Writing Equations HW #3 – Friday, December 7<sup>th</sup> (Chapter 6 Section 4 – Must Check)

Write an equation in *slope-intercept form*.

- |                               |                         |                                |                |
|-------------------------------|-------------------------|--------------------------------|----------------|
| 27) $(-4, -1)$ and $(2, 14)$  | $y = \frac{5}{2}x + 9$  | 34) $(-6, 8)$ and $(2, 0)$     | $x + y = 2$    |
| 28) $(2, 4)$ and $(-2, 8)$    | $y = -x + 6$            | 35) $(-1, 2)$ and $(3, 6)$     | $x - y = -3$   |
| 29) $(7, -6)$ and $(0, -4)$   | $y = -\frac{2}{7}x - 4$ | 36) $(-11, 6)$ and $(-4, 3)$   | $3x + 7y = 9$  |
| 30) $(2, 12)$ and $(-5, -30)$ | $y = 6x$                | 37) $(8, 4)$ and $(11, 5)$     | $x - 3y = -4$  |
| 31) $(6, 4)$ and $(9, 5)$     | $y = \frac{1}{3}x + 2$  | 38) $(-2, 0)$ and $(0, -8)$    | $4x + y = -8$  |
| 32) $(-3, 21)$ and $(4, -14)$ | $y = -5x + 6$           | 39) $(12, -33)$ and $(4, -11)$ | $11x + 4y = 0$ |
| 33) $(-2, 10)$ and $(2, -26)$ | $y = -9x - 8$           | 40) $(-5, -9)$ and $(10, 12)$  | $7x - 5y = 10$ |

### Writing Equations HW #4 – Monday, December 10<sup>th</sup> (Chapter 6 Section 6)

Write an equation in *slope-intercept form*. (State what you are provided, will use & need to write the equation.)

- |   |                          |  |                         |
|---|--------------------------|--|-------------------------|
| 41) $\parallel$ to $y = 2x + 7$<br>through $(-4, -2)$             | $y = 2x + 6$             | 48) $\perp$ to $3x + 7y = -7$<br>through $(0, -2)$     | $y = \frac{7}{3}x - 2$  |
| 42) $\perp$ to $y = \frac{3}{4}x - 1$<br>through $(12, -15)$      | $y = -\frac{4}{3}x + 1$  | 49) $\perp$ to $2x - y = -1$<br>through $(14, -2)$     | $y = -\frac{1}{2}x + 5$ |
| 43) $\parallel$ to $y = -x - 6$<br>through $(-3, -8)$             | $y = -x - 11$            | 50) $\parallel$ to $4x + 3y = 3$<br>through $(-3, 11)$ | $y = -\frac{4}{3}x + 7$ |
| 44) $\parallel$ to $y = -\frac{1}{8}x + 9$<br>through $(-8, -14)$ | $y = -\frac{1}{8}x - 15$ | 51) x-int: 1 y-int: -3                                 | $y = 3x - 3$            |
| 45) $\perp$ to $y = \frac{3}{5}x - 12$<br>through $(2, 1)$        | $y = -\frac{5}{2}x + 6$  | 52) x-int: -7 y-int: 8                                 | $y = \frac{8}{7}x + 8$  |
| 46) $\parallel$ to $4y = -2x + 8$<br>through $(4, -3)$            | $y = -\frac{1}{2}x - 1$  | 53) y-int: -2 x-int: -4                                | $y = -\frac{1}{2}x - 2$ |
| 47) $\perp$ to $x - 9y = 9$<br>through $(-2, -18)$                | $y = -9x - 36$           | 54) x-int: 5 y-int: -5                                 | $y = x - 5$             |
|   |                          | 55) y-int: -6 x-int: 13                                | $y = \frac{6}{13}x - 6$ |