Around the World – Equations of Lines

1. Write the general formula for each of the following forms of a line: A. General Form B. Slope-Intercept Form C. Point-Slope Form	2. Write the slope-intercept form of the line that passes through $(0, 4),\ (-1, -1)$
3. Write the slope-intercept form of the line $-10x - y = 5$	4. Write the equation in y-intercept form $y + 4 = -7(x - 1)$
5. Graph $y = \frac{6}{5}x - 2$	6. Write the equation of the line that has $slope = -\frac{1}{7}$ *and* $(-2, 4)$
7. Write the standard form of the equation of the line $y = -\frac{7}{5}x + 1$	8. Write the slope-intercept form of the line that passes through $(-3, 2),\ (0, -1)$
9. Write that slope-intercept form of the line that passes through (2, 4) and is perpendicular to $y = -\frac{2}{7}x - 5$	10. Graph $9x + y = 5$
11. Write the standard form of the equation of the line that has $slope = -\frac{3}{5}$ *and* $y - \text{int} : 5$	12. Graph $-y = x + 2$
13. Graph $2y = -2$	14. Graph $2x + y = 5$

15. Write the standard form of the equation of the line that has $slope = 9 \text{ and } y-\text{int} : 4$	16. Write the equation of the line that passes through (–2, 4) and is parallel to $y = -\frac{3}{2}x + 3$
17. Write an equation for a line that has zero slope. Sketch the graph.	18. Write an equation for a line that has an undefined slope. Sketch the graph.
19. Given the standard form of the equation, write the equation in slope-intercept form. Identify the slope and they y-intercept. $5x - 9y = 36$	20. Write the equation of the line that passes through the two points (NO DECIMALS). $\left(\frac{1}{2}, \frac{5}{4}\right), \left(2, \frac{1}{2}\right)$
21. Sketch the line $5y + 2x = -15$. Find the equation of the line that is parallel to this and passes through the point (–5, 1). Sketch the graph on the same plane. Find the equation of the line that is perpendicular to this and passes through the point (4, –2). Sketch the graph on the same plane	22. Sketch the line $x + 6y = -30$. Find the equation of the line that is parallel to this and passes through the point (12, 3). Sketch the graph on the same plane. Find the equation of the line that is perpendicular to this and passes through the point (–2, –3). Sketch the graph on the same plane.

Answer Bank (not in order)

$y = 5x + 4$

$y = -10x - 5$

$y = -\frac{1}{7}x + \frac{26}{7}$

$y = \frac{7}{2}x - 3$

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

$y = \frac{5}{9}x - 4$

$m = \frac{5}{9},\ y - \text{int}\ (0, -4)$

$y = -x - 1$

$7x + 5y = 5$

$3x + 5y = 25$

$9x - y = -4$

$y = -7x + 3$

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

many possible answers :
$x = \#$ *and graph a vertical line*

many possible answers :
$y = \#$ *and graph a horizontal line*

General form: $Ax + By = C$
Slope – int form: $y = mx + b$
Point – Slope form: $y - y_1 = m(x - x_1)$