Name: _____ Unit 1 – Basic Math Skills

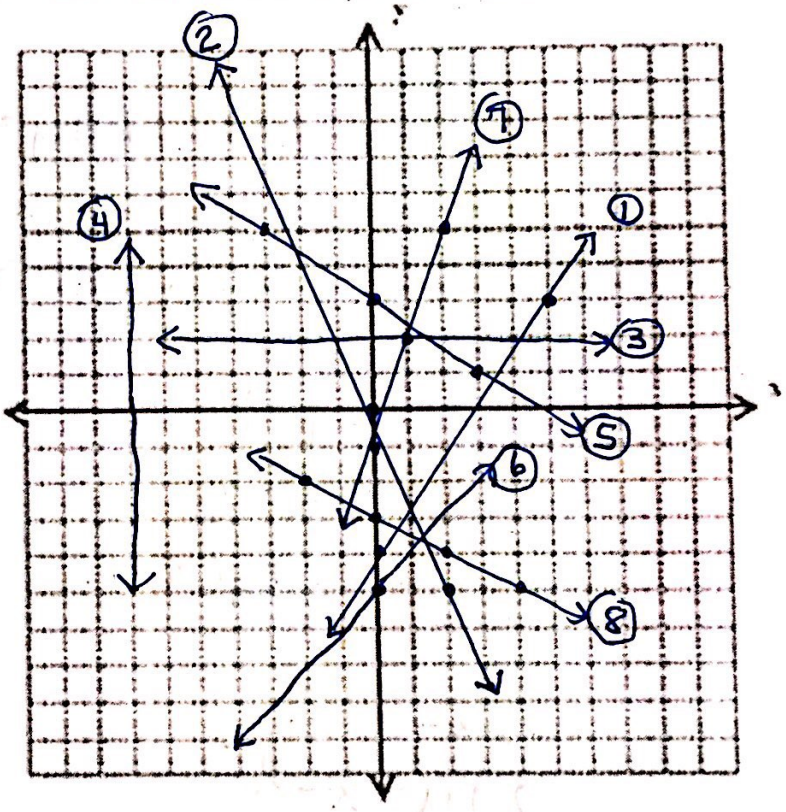
Formulas:

.andard from: $Ax + By = C$ Point –Slope: $y - y_1 = m(x - x_1)$

Slope- Intercept: $y = mx + b$ Slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$

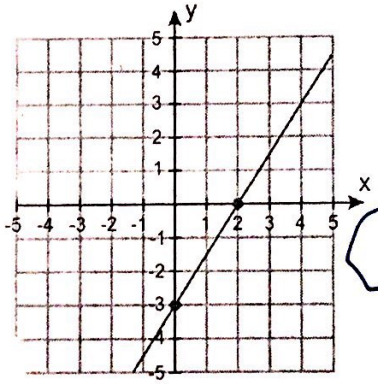
Sketch each of the following equations on the graph below. Each line should include at least two points and have arrows on each end. Label each line with its problem number.

1. $y = \frac{7}{5}x - 4$
2. 2. $y = \frac{-5}{2}x$
3. $y = 2$
4. $x = -7$
5. $2x + 3y = 9$
6. $x - y = 5$
7. $y - 2 = 3(x - 1)$
8. $y + 1 = -\frac{1}{2}(x + 4)$



Write the equation of each line in standard, slope- intercept and point slope form.

9.

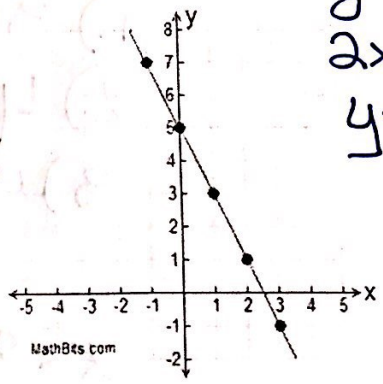


$y = \frac{3}{2}x - 3$

$3x - 2y = 6$

$y - -3 = \frac{3}{2}(x - 0)$

10.



$y = -2x + 5$

$2x + y = 5$

$y - 5 = -2(x - 0)$

Write the equation of each of the equation line in standard form, slope-intercept and point slope form. ① ② ③

.) through (3, -5) with slope of $\frac{-7}{3}$.

1.) $7x + 3y = 6$

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

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

12.) through (-4, 3) parallel to $y = -\frac{5}{4}x + 1$

1.) $5x + 4y = -8$

2) $y = -5/4x - 2$

3) $y - 3 = -5/4(x + 4)$

13.) through (1, 0) perpendicular to y = -3x – 7

1) $x - 3y = 1$

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

3) $y - 0 = 1/3(x - 1)$

14.) through (0, -2) and (-3, -5)

1) $x - y = 2$

2) $y = x - 2$

3) $y + 2 = 1(x - 0)$

15.) through (1, -1) and (5, 2)

1.) $3x - 4y = 7$

2.) $y = 3/4x - 7/4$

3) $y - 2 = 3/4(x - 5)$

16.) slope undefined passing through (8, -4)

$x = 8$