Unit 1: Review Sheet

1. Domain: 0, 4, 8, 4, -5 (4 repeats)
   Not a function

2. D: $\bullet, \{-5, 0, 4, 8\}$
   R: $\{-3, 0, 3, 8\}$

3. $f(-3) = 3(-3) - 5$
   $= -9 - 5$
   $= -14$
   $g(-2) = 2(-2)^2 + (-2)$
   $= 2(4) - 2$
   $= 8 - 2$
   $= 6$

4. Zero

5. $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-4-2}{4-(-2)} = \frac{-6}{6} = -1$

6. $x = 3$

7. $2x - 5y = -10$
   $-5y = -2x - 10$
   $y = \frac{2}{5}x + 2$
   $m = \frac{2}{5}$

8. $y - (-3) = \frac{3}{8}(x - 5)$
   $y + 3 = \frac{3}{8}x - \frac{15}{8}$
   $y = \frac{3}{8}x - \frac{15}{8} - 3$
   $y = \frac{3}{8}x - \frac{15}{8} - \frac{24}{8}$
   $y = \frac{3}{8}x - \frac{39}{8}$

9. $y - 4 = 2(x - 3)$

10. $4x - 5y = -20$
    $-5y = -4x - 20$
    $y = \frac{4}{5}x + 4$

11. $m = \frac{5-2}{-2-5} = \frac{3}{-7}$

    $y = mx + b$
    $2 = -\frac{3}{7}(5) + b$
    $2 = -\frac{15}{7} + b$
    $b = 2 + \frac{15}{7} = \frac{14}{7} + \frac{15}{7}$
    $b = \frac{29}{7}$

12. $2x - 3y = 12$

$-3y = -2x + 12$

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

$\parallel m = 2/3$

$y + 5 = \frac{2}{3}(x - 1)$

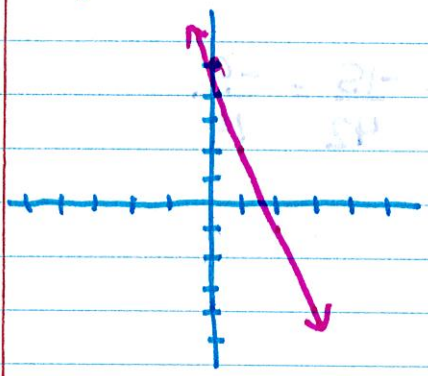
$y + 5 = \frac{2}{3}x - \frac{2}{3}$

$y = \frac{2}{3}x - \frac{17}{3}$

$y = \frac{2}{3}x - \frac{2}{3} - \frac{15}{3}$

13. $x = 6$

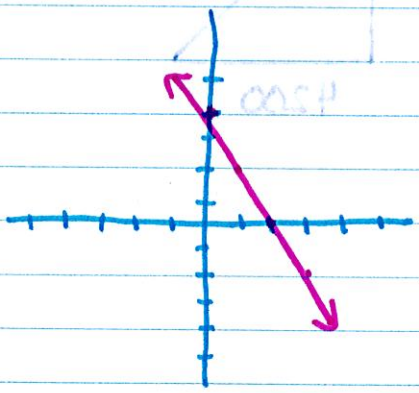
14. $y = -3x + 5$



$4x + 2y = 8$

$2y = -4x + 8$

$y = -2x + 4$



15. $5x - 2y = 10$

$-2y = -5x + 10$

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

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

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

$-4\left(-\frac{3}{4}x\right) + (y) = (-2)^4$

$3x - 4y = 8$

17. $y - 5 = 3(x + 1)$

$y - 5 = 3x + 3$

$y = 3x + 8$

18. $y = -4(-2) - 1$ $\quad y = -4(3) - 1$ $\quad y = -4(-5) - 1$

$y = 8 - 1$ $\quad y = -12 - 1$ $\quad y = 20 - 1$

$y = 7$ $\quad y = -13$ $\quad y = 19$

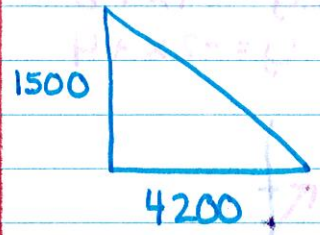
Range: $\{-13, 7, 19\}$

19. $4y - 8 = 6x + 9$

$-6x + 4y - 8 = 9$

$-6x + 4y = 17$

$6x - 4y = -17$

20. 

$m = \frac{-1500}{4200} = \frac{-15}{42} = \frac{-5}{14}$