Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Review for Unit 1 Test 1**

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| 1) Identify the domain and range of the given relation and state if it is a function. {(-3, 8), (-2, 6), (-1, 4), (0, 2), (-1, 0)} |
| 2) Identify the domain and range of the given relation and state if it is a function. x y  4 2  0 -2  1 2  -1 -2 |
| 3) Identify the domain and range of the given relation and state if it is a function Input Output 7  5 6 3  1 5 |
| 4) Are the following functions? Then evaluate $f(3)$. |
| 5) Graph the following lines. a) y = 2x - 4 b) 5x – 2y = 10  \_\_\_\_\_ Slope: \_\_\_\_\_\_\_  Slope: \_\_\_\_\_\_\_ x-int: \_\_\_\_\_\_\_\_ x-int: \_\_\_\_\_\_\_\_ y-int: \_\_\_\_\_\_\_\_\_ y-int: \_\_\_\_\_\_\_\_ |
| 6) Given the standard form of the equation: $4x-2y=20$ a) Find the intercepts. c) Find the slope. b) Rewrite the equation in slope-intercept form. |
| 7) Investigate the function: $f\left(x\right)=-\frac{1}{2}\left|x-2\right|+6$Parent Function: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Horizontal Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Locator Pt (Vertex): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Line of Symmetry: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Opens: Up or Down Compressed or Stretched |
| 8) Your movie rental club costs $10 month plus $5 for each movie rented. a) Write a linear equation that represents the problem. b) Graph the equation.c) What is the total cost if one month you rent 8 movies? |
| 9) Solve the linear equations.1. 10 – 2(2x + 1) – (3x – 4) = -9x + 4 – 4x b.
 |
| 10) Write the equation for each graph shown. a) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Domain: \_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_ Domain: \_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_ Range: \_\_\_\_\_\_\_\_ |
| 11) Solve the absolute value equations. Remember to check solutions when necessary.1. b.
2. d.
 |
| 12) Write an equation which indicates that the parent absolute value function has been translated vertically 2 units down, horizontally 3 units to the right, and has been stretched vertically by a factor of 3. What is the vertex? |
| 13) Write the equation of the line that goes through the points in the table, in both explicit and recursive form.

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| $$x$$ | 0 | 1 | 2 |
| $$f(x)$$ | 10 | 7.5 | 5 |

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| http://www.coolmath.com/sites/cmat/files/images/05-lines-09.gif14) Write the equation of the line that is graphed below. |
| 15) Write the equation of the line that goes through the points (3, 5) and (4, 15). |
| 16) Convert the explicit form into recursive form for the equation: $y=-3x+6.$ |
| 17) Convert the recursive form into explicit form for the equation: $\begin{matrix}y\_{0}=5\\y\_{n}=y\_{n-1}-5\end{matrix}$ |