Algebra 1 Name:

Unit 11 – Day 7 – Quiz 2 Review

1) Identify the characteristics of the graph shown below.



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| a) $(-\infty , \infty )$ | b) $(-\infty , -1)$ | c) $\left(-\infty , -3\right)∪(1, \infty )$ | d) $x=-1$ |
| e) $y=8$ | f) $(-1, \infty )$ | g) $\left(-3, 1\right)$ | h) $\left(-1, 8\right)$ |
| i) $\left(-3,0\right)$ and $\left(1, 0\right)$ | j) $(-\infty , 8)$ | k) $x=-3$ and $x=1$ | l) $(0, 6)$ |

|  |  |  |
| --- | --- | --- |
| Vertex: \_\_\_\_\_ | Axis of Sym: \_\_\_\_\_ | Domain: \_\_\_\_\_ |
| Range: \_\_\_\_\_ | Y-Intercept: \_\_\_\_\_ | X-Intercept(s): \_\_\_\_\_ |
| Zeroes: \_\_\_\_\_ | Extrema: max or min | Max/min Value: \_\_\_\_\_ |
| Positive: \_\_\_\_\_ | Negative: \_\_\_\_\_ |  |
| Increasing: \_\_\_\_\_ | Decreasing: \_\_\_\_\_ |  |

2) Convert the following to standard form.

$y=-\left(x+2\right)^{2}-6$ $y=4(x-3)^{2}+2$

3) Find the vertex of each of the following:

$y=2x^{2}-8x+9$ $y=-x^{2}+6x-2$ $y=6x^{2}+12x$

4) Identify whether each of the following have a maximum or a minimum by looking at the equation.

 $y=2x^{2}-8x+3$

 $y=-4x^{2}+9$

 $y=-x^{2}-x$

 $y=21x^{2}+11x+7$

5) For each characteristic below, state whether quadratics always have them or sometimes have them.

 Y-Intercept:

 Maximum:

 Mimimum:

 X-Intercept:

 Increasing Part:

 Decreasing Part:

 Extrema: