**Unit 1 Warm Up**

Find the key features for the following:

1.

Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Increasing: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decreasing: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Positive: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Negative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Maximum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Relative Absolute

Minimum: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Relative Absolute

X-intercept(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the graph a function? YES or NO

2. Given the equation, list the transformations:

|  |  |
| --- | --- |
| $$y=2\left(x-3\right)^{2}+5 $$Transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | $$y=\left|x-5\right|-2 $$Transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

3. Given the transformations, write the equation:

|  |  |
| --- | --- |
| Parent: $y=x^{2}$ Transformations: Up 2, stretch by 4Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Parent: $y=\sqrt{x}$ Transformations: left 4, reflect, compress by factor of ½ Equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4. Given the following, write the inverse:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x | y |  | x | y |
| 2 | 7 |  |  |  |
| 3 | 9 |  |  |  |
| 4 | 17 |  |  |  |

Find the inverse: $$y=2x+3$$Inverse: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_$$y=\frac{1}{5}x-6$$Inverse: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 5. Evaluate for each of the following: $$f\left(-2\right) when f\left(x\right)=\left\{\begin{array}{c}2x+8 if x\leq -2\\x^{2} if x>-2\end{array}\right.$$$$f\left(-2\right)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$Image result for piecewise function$$f\left(-1\right)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$$$f\left(1\right)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$$$f\left(1.5\right)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$$$f\left(2\right)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$$ |