Algebra 1 – Test Review Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Graphing Quadratic Equations & Characteristics & Transformations

**Describe the transformation using the quadratic equation.**

 1.  2. 

 Horizontal Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Horizontal Shift:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Reflection: none x-axis y-axis Reflection: none x-axis y-axis

 Vertical Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vertical Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Dilation: none stretch shrink Dilation: none stretch shrink

 3.  4. 

 Horizontal Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Horizontal Shift:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Reflection: none x-axis y-axis Reflection: none x-axis y-axis

 Vertical Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Vertical Shift: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Dilation: none stretch shrink Dilation: none stretch shrink

**Identify the vertex of each graph; identify whether it is a minimum or a maximum.**

5. 6.

Vertex: ( , ) \_\_\_\_\_\_\_\_\_ Vertex: ( , ) \_\_\_\_\_\_\_\_\_

**Without graphing the quadratic functions, complete the requested information:**

|  |  |
| --- | --- |
| 7. What is the direction of opening? \_\_\_\_\_\_\_Is the vertex a max or min? \_\_\_\_\_\_\_Wider or narrower than *y* = *x*2 ? \_\_\_\_\_\_\_\_\_\_ | 8. What is the direction of opening? \_\_\_\_\_\_\_Is the vertex a max or min? \_\_\_\_\_\_\_Wider or narrower than *y* = *x*2 ? \_\_\_\_\_\_\_\_\_\_\_ |

**Graph the following equation and find the requested information.**

9. f(x)= -x2 + 2x + 3Opens: UP or DOWN10. f(x)= 2x2 – 8x + 6Opens: UP or DOWN

Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AOS: \_\_\_\_\_\_\_\_\_\_\_\_ Vertex: \_\_\_\_\_\_\_\_\_\_\_\_ AOS: \_\_\_\_\_\_\_\_\_\_\_\_ Vertex: \_\_\_\_\_\_\_\_\_\_\_\_

y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_ y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_



11. f(x)= 0.5(x – 2)(x + 4)Opens: UP or DOWN12. f(x)= -x(x +2)Opens: UP or DOWN

Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x-intercepts: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AOS: \_\_\_\_\_\_\_\_\_\_\_\_ Vertex: \_\_\_\_\_\_\_\_\_\_\_\_ AOS: \_\_\_\_\_\_\_\_\_\_\_\_ Vertex: \_\_\_\_\_\_\_\_\_\_\_\_

y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_ y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_



13. f(x)= 3(x – 1)2 – 10 Opens: UP or DOWN14. f(x)= -x2 – 2 Opens: UP or DOWN

Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Form: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AOS: \_\_\_\_\_\_\_\_\_\_\_\_ Vertex: \_\_\_\_\_\_\_\_\_\_\_\_ AOS: \_\_\_\_\_\_\_\_\_\_\_\_ Vertex: \_\_\_\_\_\_\_\_\_\_\_\_

y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_ y-intercept: \_\_\_\_\_\_\_\_\_\_\_\_



|  |  |
| --- | --- |
| Vertex |  |
| Domain |  |
| Range |  |
| Increasing Interval |  |
| Decreasing Interval |  |
| Zeros |  |
| Y-intercept |  |
| Maximum |  |
| Minimum |  |
| Axis of Symmetry |  |
| Left End Behavior | As x🡪-, y🡪 \_\_\_\_\_\_\_ |
| Right End Behavior | As x🡪, y🡪 \_\_\_\_\_\_\_ |

15.



|  |  |
| --- | --- |
| Vertex |  |
| Domain |  |
| Range |  |
| Increasing Interval |  |
| Decreasing Interval |  |
| Zeros |  |
| Y-intercept |  |
| Maximum |  |
| Minimum |  |
| Axis of Symmetry |  |
| Left End Behavior | As x🡪-, y🡪 \_\_\_\_\_\_\_ |
| Right End Behavior | As x🡪, y🡪 \_\_\_\_\_\_\_ |

16.

\_\_\_\_\_\_\_ 17. What is the vertex of the following quadratic function ?

A. (-3, -2) B. (-2, 4) C. (2, 4) D. (-3, 4)

\_\_\_\_\_\_\_ 18. Which of the following graphs has an increasing interval from (-, -2)?

A. B. C. D.

\_\_\_\_\_\_\_ 19. What transformation occurs in this function ?

A. down 7 units B. up 7 units C. right 7 units D. left 7 units