Algebra 2 TEST 2.2 Review **DO ON OWN PAPER!**

I. Simplify. Make all exponents positive.

|  |  |  |  |
| --- | --- | --- | --- |
| 1.  | 2.  | 3.  | 4.  |
| 5.  | 6.  | 7.  | 8.  |
| 9.  | 10.  | 11.  | 12.  |

III. Estimate to the nearest hundredth.

|  |
| --- |
| 13.  |

IV. Simplify. Leave answers exact. NO DECIMALS.

|  |  |  |  |
| --- | --- | --- | --- |
| 14. $$4\sqrt{3}-2\sqrt{75}+3\sqrt{6}$$ | 15.  | 16.  | 17.  |

V. Given the parent function $f\left(x\right)= \left|x\right|$, write the equation that translates  to have the given vertex.

|  |  |  |  |
| --- | --- | --- | --- |
| 18.  | 19.  | 20.  | 21.  |

VI. State the transformations from the parent function.

|  |  |
| --- | --- |
| 22.  | 23.  |
| 24.  | 25.  |

VII. Write the equation of  and  with the following transformations.

|  |  |
| --- | --- |
| 26.  translated right 2 and down 3 with a reflection across the -axis | 27.  with a vertical compression factor of  and reflected across the -axis |

VIII. State the vertex for the following functions.

|  |  |  |
| --- | --- | --- |
| 31.  | 32.  | 33.  |

XI. Graph the following functions. Show points including transformations from the parent function. Then state the domain and the range.

|  |  |
| --- | --- |
| 45.  | 46.  |

Algebra 2 TEST 2.2 Review ANSWERS

1.  2.  3.  4.  5.  6.  7.  8.  9.  10. 

11.  12.  13.  14. $-2\sqrt{3}+3\sqrt{6}$ 15.  16. 17. 

18.  19.  20.  21. 

22. reflected across the x-axis and translated up 3 units

23. vertical stretch by a factor of 3 and translated to the right 2 units

24. translated down 2 units and to the left 5 units

25. vertical compression by factor of , translated up 5 units and to the right 1 unit

26.  27.  31.  32.  33. (-1,3)

45.  46. 

 