Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Unit 6 Test Review**

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| 1. The equation can be used to estimate the speed, *s*, of a car in miles per hour, given the length in feet, *x*, of the tire marks it leaves on the ground. A car traveling at a speed of 90 miles per hour came to a sudden stop. According to the equation, how long would the tire marks be for this car? 2. 355 feet 3. 380 feet 4. 405 feet 5. 430 feet | 1. Find the vertex of |

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| 1. Find the domain and range, and increasing/decreasing intervals of each: | | | |
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| 1. Write an equation for the following | | 1. Write an equation for the following graph. | |
| 1. Write the equation of the square root function that is compressed vertically by a factor of 1/3, shifted up 9, and left 2. | | | |
| 1. Write the equation of a reciprocal function (inverse variation) that is compressed vertically by a factor of 2/3, translated left 4 and down 6. | | | |
| Find each of the following, using PROPER NOTATION:   1. Transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. End Behavior: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. Increasing Interval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. Vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_ 7. Transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. Decreasing Interval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. y-intercept: \_\_\_\_\_\_\_\_\_\_\_ 10. Transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 11. Vertical Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12. End Behavior: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 13. Horizontal Asymptote: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 14. Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 15. Vertex: \_\_\_\_\_\_\_\_\_\_\_\_\_ 16. Transformations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 17. Decreasing Interval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 18. y-intercept: \_\_\_\_\_\_\_\_\_\_\_ | | | |