Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

Math 622: Sections 7.1-7.3 Review

|  |  |
| --- | --- |
|  1.  is read \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. True or False: Power functions with odd exponents have values in Q1 and Q3. | 3. Which of the following could be the graph of the function y = x6 ? a) b) c)  |

Simplify each of these as much as possible. Use positive exponents only.

|  |  |
| --- | --- |
| 4.   | 5.  |
| 6.  | 7.  |
| 8.  | 9.  |
| 10.  a) b) c)tive exponents: \_\_\_\_\_\_\_\_\_\_\_,a) b) c)tive exponents: \_\_\_\_\_\_\_\_\_\_\_, | 11.   |
| 12.   | 13.   |
| 14.  | 15.  |
| For #16 and 17, write as a simple fraction with no exponents: |
| 16.  | 17.  |
| 18. This is part of the graph of the function Screen shot 2012-10-29 at 8State its Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_State its Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_In what Quadrants is this graph? \_\_\_\_\_ & \_\_\_\_\_Symmetry type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Screen shot 2012-10-29 at 819.This is a graph with the point (2, 64). Name one other point that is definitely on this graph. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_What is its equation?f(x) = \_\_\_\_\_\_\_\_\_\_\_\_\_State its Domain: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_State its Range: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_In what Quadrants is this graph? \_\_\_\_\_ & \_\_\_\_\_Symmetry type: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 20. The point (-4, -64) is on the graph of a power function.a. Is the function an even or an odd power function? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_b. What is its equation?f(x) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 21. Write the following in Scientific Notation:1. 45, 000, 000 =
2. =
3. (5 x 10-4)2 =
 |

Answers:

1. the nth power of x. 2. True 3. a

4.  5.  6. 

7.  8.  9. 

10. 7 11.  12. 

13.  14. 

15. 16.  17. 

18. 19.

D: all Real numbers D: all Real numbers

R: all Real numbers R: all non-negative Real numbers

Quadrants: I and III Quadrants: I and II

Rotation symmetry about (0,0) Reflection symmetry across the y-axis

 20. a) odd b) f(x) = x3 21. a) 4.5 x 107 b) 2.2 x 106 c) 2.5 x 10-7