

Algebra 2 – Function Types Worksheet

Name: Key Hour: \_\_\_\_\_

Label each of the following equations as one of the following: Linear, Quadratic, Cubic, Polynomial, Radical, Rational Exponent, Rational, Logarithmic, or Exponential. Don't use Polynomial unless the equations are not linear/quadratic/cubic.

1.  $y = \frac{x}{2x+5}$  Rational

2.  $4x + 2y = 6$  Linear

3.  $y = \sqrt{\frac{1}{2}x + 3} - 5$  Radical

4.  $2x^2 = y - 3x^3 + 4x - 1$  Cubic

5.  $y = 3x^3 - \frac{2}{3}x^6 - 31 + x$  Polynomial

6.  $y = \frac{1}{2}(4)^{x-1} + 7$  Exponential

7.  $y = \frac{5}{7}x - 9$  Linear

8.  $y = 6x^{\frac{2}{3}} + 5$  Rational Exponent

9.  $y = 3x - \frac{1}{2}x^2 + 8$  Quadratic

10.  $y = \frac{x^3 - 4x}{x^2 + 5x - 1}$  Rational

11.  $y = -3(x + 1)^3 - 8$  Cubic

12.  $y = \log_2 x - 4$  Logarithmic

13.  $y = -\sqrt[3]{x+1}$  Radical

14.  $2y + 1 = 5x^2$  Quadratic

15.  $y = -\frac{3}{4}\ln(x) + 23$  Logarithmic

16.  $y = 6^x - 1$  Exponential

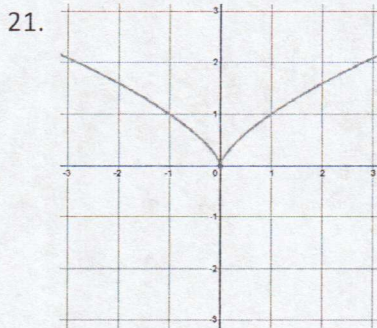
17.  $y = -\frac{1}{2}x^8 + 4x^3 - 31$  Polynomial

18.  $y = -x + 5x^2 + 7$  Quadratic

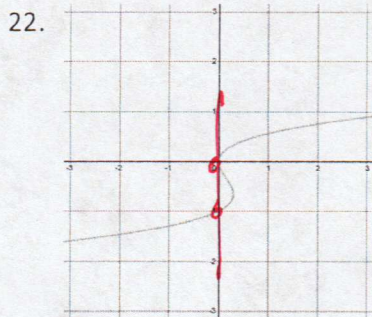
19.  $y = -3 + 2x^{\frac{4}{5}}$  Rational Exponent

20.  $y + 4x = 5y - 2$  Linear

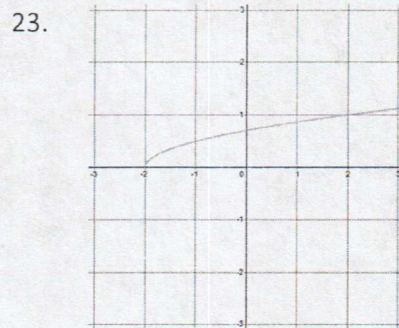
Use the vertical line test to determine if the following graphs are functions.



is a  
Function



is Not  
a Function



is a  
Function