

NAME: \_\_\_\_\_ Score \_\_\_\_\_ /10

Please **print** your name

1. A linear function is a function whose rule may be written as  $f(x) = mx + b$ .
2. A quadratic function is a function whose rule may be written as  $f(x) = ax^2 + bx + c$ .
3. A polynomial function is a function whose rule may be written as

$$f(x) = a_n x^n + a_{n-1} x^{n-1} + \dots + a_1 x + a_0.$$

4. A rational function is a function whose rule can be written as

$$f(x) = \frac{a_n x^n + a_{n-1} x^{n-1} + \dots + a_1 x + a_0}{b_m x^m + b_{m-1} x^{m-1} + \dots + b_1 x + b_0}.$$

5. The exponential function base  $e$  is the function whose rule may be written as  $\exp(x) = e^x$ .
6. The exponential function base 10 is the function whose rule may be written as  $\exp_{10}(x) = 10^x$ .
7. The absolute value function is the function whose rule may be written as

$$\text{Abs}(x) = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$

8. An arithmetic sequence is a function whose rule may be written as  $a(n) = dn + b$ .
9. A constant function is a function whose rule may be written as  $f(x) = c$ .
10. The identity function is the function whose rule may be written as  $f(x) = x$ .