

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

Please **print** your name

1. T F If  $f$  is a function whose domain is the Real Numbers then  $f(3)$  is a range element.
2. T F If  $f$  is a function whose domain is the Real Numbers then  $f(3)$  is a domain element.
3. T F The point  $(3, 7)$  is on the graph of a function  $h$  if and only if  $h(7) = 3$ .
4. T F If  $f$  is a fifth degree polynomial function then its graph crosses the  $x$ -axis five times.
5. T F If  $m$  is a real zero of a function then  $(m, 0)$  is an  $x$ -intercept of its graph.
6. T F If  $f$  is a polynomial function with integer coefficients and  $\frac{p}{q}$  is a zero of  $f$ , then  $p$  is a divisor of the constant term.
7. T F If  $f$  is a polynomial function with integer coefficients and  $\frac{p}{q}$  is a zero of  $f$ , then  $p$  is a divisor of the leading coefficient.
8. T F The graph of a polynomial function is a continuous smooth curve with no gaps or sharp corners.
9. T F Consider the function whose rule is  $f(x) = x^6 + x^5 - 5x^3 + 6$ . The possible rational zeros of  $f$  are  $\pm 1, \pm 2, \pm 3, \pm 6$
10. T F Consider the function whose rule is  $f(x) = 6x^6 + x^5 - 5x^3 + 1$ . The possible rational zeros of  $f$  are  $\pm 1, \pm 2, \pm 3, \pm 6$