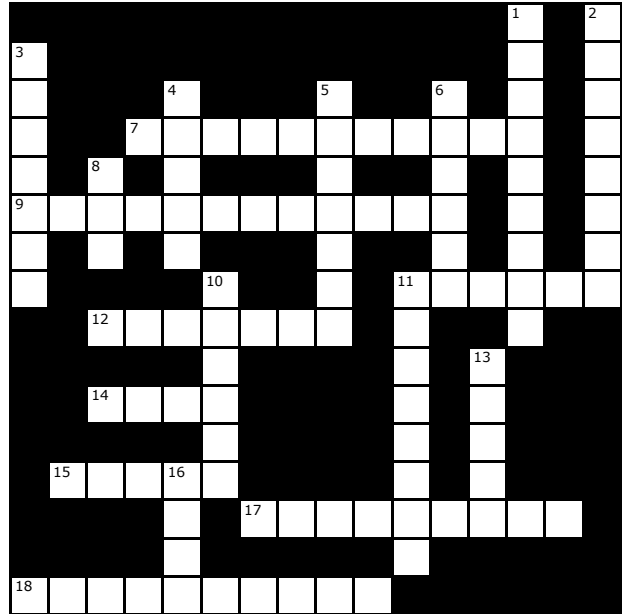


## Advanced Functions 12

### Chapter 1: Polynomial Functions

#### Across

- 7** The number in front of a variable.
- 9** A term describing what happens to  $y$  values of a function for very large and very small values of  $x$ . (2 words)
- 11** A line used to calculate average rates of change.
- 12** The point  $(0, 3)$  is the \_\_\_\_\_ of the function  $y = x^4 + 3$ .
- 14** (With 11 Down) The function  $y = -x^4 + x^2 + 3$  has \_\_\_\_\_. (2 words)
- 15** The function  $a(x) = (x - 3)^3$  has one zero of \_\_\_\_\_ 3.
- 17** A function of degree two.
- 18** A function of the form  $a_n x^n + a_{n-1} x^{n-1} + \dots$



#### Down

- 1** What "!" represents, symbolically.
- 2** The term with degree zero is called a \_\_\_\_\_.
- 3** A line used to calculate instantaneous rates of change.
- 4** Another word for exponent.
- 5** The point  $(2, 4)$  is the \_\_\_\_\_ of the function  $f(x) = x^2 - 4x + 8$ .
- 6** The function  $g(x) = 4x^3 - 3x^5$  has a \_\_\_\_\_ of 5.
- 8** A function such as  $y = 4x^5$ .
- 10** A function such as  $m(x) = 4x - 3$ .
- 11** See 14 across or 13 down.
- 13** (With 11 Down) The function  $y = 2x^3 - x$  has \_\_\_\_\_ \_\_\_\_\_. (2 words)
- 16** If  $f(x) = f(-x)$  for all  $x$ , then  $f(x)$  is an \_\_\_\_\_ function.