

Pre-Calculus

Find ALL the zeros of a given polynomial function.

1.  $f(x) = x^4 - 4x^3 + 28x^2 - 100x + 75$

2.  $f(x) = x^4 + 2x^3 + x^2 + 18x - 72$

3.  $f(x) = x^4 + 12x^3 + 46x^2 + 60x + 25$

4.  $f(x) = x^4 + 3x^3 - 15x^2 - 51x - 34$

5.  $f(x) = x^4 + 11x^3 + 43x^2 + 69x + 36$

6.  $f(x) = x^4 - 2x^3 + x^2 - 8x - 12$

7.  $f(x) = x^4 - 14x^3 + 68x^2 - 130x + 75$

8.  $f(x) = x^4 + 6x^3 + 16x^2 + 42x + 63$

9.  $f(x) = x^4 - 4x^3 + 40x^2 - 144x + 144$

10.  $f(x) = x^4 + 12x^3 + 51x^2 + 92x + 60$

11.  $f(x) = x^4 - 2x^3 - 12x^2 + 26x - 13$

12.  $f(x) = x^4 - x^3 - 17x^2 + 11x + 66$

13.  $f(x) = x^4 + 10x^3 + 35x^2 + 50x + 24$

14.  $f(x) = x^4 - 18x^3 + 117x^2 - 328x + 336$

15.  $f(x) = x^4 - 13x^3 + 58x^2 - 108x + 72$

16.  $f(x) = x^4 - 8x^3 + 18x^2 - 16x + 5$

17.  $f(x) = x^4 - 9x^3 + 17x^2 + 27x - 60$

18.  $f(x) = x^4 + 9x^3 + 13x^2 - 45x - 90$

19.  $f(x) = x^4 + x^3 - 13x^2 - 7x + 42$

20.  $f(x) = x^4 + 2x^3 + 12x^2 + 22x + 11$