

Use the Rational Zeros Theorem to write a list of all potential rational zeros

12) $f(x) = 2x^3 + 5x^2 + 12x - 8$

13) $f(x) = 3x^3 + 37x^2 + 37x + 27$

Find all rational zeros.

14) $f(x) = 4x^3 - 8x^2 - x + 2$

15) $f(x) = x^4 + 2x^3 + 2x^2 - 4x - 8$

Use synthetic division to determine whether the number k is an upper or lower bound (as specified) for the real zeros of the function f .

16) $k = 4$; $f(x) = 5x^3 + 2x^2 + 4x + 6$; Upper bound?

17) $k = 0$; $f(x) = x^3 + 5x^2 - 4x + 3$; Lower bound?

Find all of the real zeros of the function. Give exact values whenever possible. Identify each zero as rational or irrational.

18) $f(x) = x^3 + 2x^2 - 5x - 10$

19) $f(x) = 6x^3 + 25x^2 + 12x - 7$