

Answer on Question #42527, Math, Calculus

State how many imaginary and real zeros the function has.

$$f(x) = x^3 - 20x^2 + 123x - 216$$

Factor expression:

$$f(x) = (x-9)(x-8)(x-3)$$

The high term shows that function has 3 roots.

Use zero product rule:

$$(x-9)(x-8)(x-3) = 0;$$

$$x=9;x=8;x=3$$

Answer: 0 imaginary; 3 real