

### Answer on Question #42688 – Math - Calculus

Divide  $f(x)$  by  $d(x)$ , and write a summary statement in the form indicated.

$$f(x) = x^4 - 4x^3 + 2x^2 - 4x + 1; d(x) = x^2 + 1$$

help me please

**Answer.**

$$\frac{x^4 - 4x^3 + 2x^2 - 4x + 1}{x^2 + 1} = x^2 + \frac{-4x^3 + x^2 - 4x + 1}{x^2 + 1} = x^2 - 4x + \frac{x^2 + 1}{x^2 + 1} = x^2 - 4x + 1.$$

**Checking:**

$$(x^2 + 1)(x^2 - 4x + 1) = x^4 - 4x^3 + 4x^2 + x^2 - 4x + 1 = x^4 - 4x^3 + 2x^2 - 4x + 1.$$