

Divide $f(x)$ by $d(x)$ using long division. Write a summary statement in polynomial form and factored form.

$$f(x) = x^3 - 4x^2 + 2x + 5; d(x) = x - 2$$

Divide $f(x)$ by $d(x)$ using synthetic division. Write a summary statement in polynomial form and factored form.

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

Use division to tell if the first function is a factor of the second function.

$$4x - 3; 12x^3 - x^2 - 26x + 15$$

$$x^2 - 3x + 2; 3x^3 + 4x + 11$$