

A-APR The Missing Coefficient

Task

Edited

Consider the polynomial function

$$P(x) = 2x^3 + 3x^2 + ax - 2,$$

Where a , is an unknown real number.

- a. If $(x+2)$ is a factor of the polynomial, what is the value of a ?
- b. Now that you know the value of a , write $P(x)$ as the product of linear factors.
- c. Sketch a possible graph of the $P(x)$. Explain your reasoning.