

## **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.