

Exercise 5

Differentiate the function.

$$f(x) = 5.2x + 2.3$$

Solution

Take the derivative of the given function.

$$f'(x) = \frac{d}{dx}(5.2x + 2.3)$$

Use the sum rule.

$$f'(x) = \frac{d}{dx}(5.2x) + \underbrace{\frac{d}{dx}(2.3)}_{=0}$$

The derivative of a constant is zero.

$$f'(x) = \frac{d}{dx}(5.2x)$$

Use the constant multiple rule.

$$f'(x) = 5.2 \frac{d}{dx}(x)$$

Use the power rule.

$$f'(x) = 5.2(1)$$

Therefore,

$$f'(x) = 5.2.$$