

## Answer on Question #53768 – Math – Calculus

### Question

Find the derivative of  $f(x) = 5$  divided by  $x$  at  $x = -1$ .

### Solution

Apply the formula for the derivative of ratio

$$\left(\frac{u}{v}\right)' = \frac{u'v - uv'}{v^2}$$

and formulae  $(c)' = 0$ ,  $(x)' = 1$  to the function  $f(x) = \frac{5}{x}$ .

Obtain

$$f'(x) = (5/x)' = (5'x - 5x')/x^2 = -5/x^2$$

$$f'(-1) = -5/(-1)^2 = -5/1 = -5$$

**Answer:**  $f'(-1) = -5$ .