

Taking the derivative of a function

Let $f(x) = 2 * x/4$

Next, we will take the derivative $f'_x(x)$:

Step-by-step solution:

$$(2 * (x/4))' = 2' * (x/4) + 2 * (x/4)'$$

$$(x/4)' = (x' * 4 - x * 4')/4^2$$

The derivative is:

$$0 * x/4 + ((1 * 4) - (0 * x))/4^2 * 2$$

But you can see many unnecessary actions.

Let us make some simplifications:

$$0 + (4 - (0 * x))/4^2 * 2$$

$$(4 - (0 * x))/16 * 2$$

$$(4 - 0)/16 * 2$$

$$4/16 * 2$$

$$2/8 * 2$$

$$2/4$$

$$1/2$$

$$1/2$$

In this way:

$$\boxed{f'_x(x) = 1/2}$$

Further simplifications reader can hold their own.