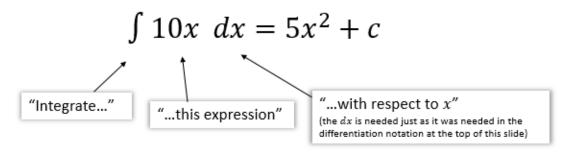
## **Integration Notation**

The following notation could be used to differentiate an expression:



There is similarly notation for integrating an expression:



This is known as **indefinite integration**, in contrast to definite integration, which we'll see later in the chapter.

It is called 'indefinite' because the exact expression is unknown (due to the +c).

Examples

1. Find 
$$\int (x^{-\frac{3}{2}} + 2) dx$$

2. Find 
$$\int (6t^2 - 1) dt$$

3. Find  $\int (px^3 + q) dx$  where p and q are constants.

## **Test Your Understanding**

Given that  $y = 2x^5 + \frac{6}{\sqrt{x}}$ , x > 0, find in their simplest form (b)  $\int y \, dx$