5.
$$f(x) = \frac{x^5 - 12x^{\frac{1}{2}}}{4x}$$

(a) Write $f(x)$ in the form

$$ax^p + bx^q$$

where a, b, p and q are simplified constants.

(3)

(b) Hence find

$$\int f(x)\,dx$$

giving your answer in simplest form.

(3)