Unit 4. Applications of integration

Problem set 8

4D. Average value

2) $\frac{1}{a}\int_a^{2a}\frac{1}{x}dx = \frac{1}{a}\ln\frac{2a}{a} = \frac{\ln 2}{a}$

3) $|f(b)-f(a)|\frac{1}{b-a} = \frac{1}{b-a}\int_a^b v(t)dt$

5) $g(x) = \frac{1}{x}\int_c^x f(t)dt \Rightarrow f(x) = x g'(x) + g(x)$