[6.5] Average Value of a Function

2. $f_{ave} = \frac{1}{\pi-(-\pi)} \int_{-\pi}^{\pi} \sin 4x dx.$

5. $f_{ave} = \frac{1}{5-0} \int_0^5 te^{-t^2} dt.$

7. $h_{ave} = \frac{1}{\pi-0} \int_0^{\pi} \cos^4 x \sin x dx.$

9. (a) $f_{ave} = \frac{1}{5-2} \int_2^5 (x-3)^2 dx.$
(b) $(c-3)^2 = 1.$
(c) See the graph in Appendix I, page A93.

13. Let $g(x) = \int_1^x f(t)dt$. Use mean value theorem.

14. $3 = f_{ave} = \frac{1}{b-0} \int_0^b 2 + 6x - 3x^2 dx.$