

Additional Mathematics Exercise 12 Answers

(Limits and Derivatives)

1. (a) 8 (b) 4 (c) 16
(d) 0 (e) $\frac{3}{5}$
2. (a) 3 (b) $\frac{1}{2}$ (c) 6
(d) $-\frac{1}{x^2}$ (e) not exist (f) 0
(g) not exist
3. $\frac{15}{2}$
4. (a) 0 (b) $\frac{2}{3}$ (c) $\frac{1}{2}$
(d) not exist (e) 3
5. (a) 1 (b) 0 (c) $\frac{1}{2}$
6. (a) 2 (b) $(\Delta x)^2 + \Delta x + 2$ (c) 1
7. -2
8. 4
9. $-\frac{1}{(5+x)^2}$
10. $3x^2 + 2x$
11. $-\frac{x}{\sqrt{4-x^2}}$
12. $\frac{1}{3x^{\frac{2}{3}}}$
13. $\frac{2}{(x+2)^2}$
14. $-\frac{6}{x^4}, -\frac{3}{8}$
15. $-\frac{1}{2(x+1)^{\frac{3}{2}}}, -\frac{1}{16}$