MTH 1002 Practice Test A Answers

1. a) Neither b) Odd

Similar questions: Notes 2, p. 1
Practical 2, q. 1
Coursework, q. 1

2. $\lim_{u \to 3} \dfrac{u^2 + u - 12}{u^2 - 9} = \dfrac{7}{6}$

$\lim_{x \to 0} \dfrac{e^x + e^{-x} - 2}{x^2} = 1$

Similar questions: Practical 4, qq. 1, 2 and 6
Notes 4, pp. 1 - 2
Coursework, q. 6

3. $z = 6e^{7\pi i/4}$

Similar questions: Practical 3, q. 1
Notes 3, pp. 2 - 3

4. -64

Similar questions: Practical 3, qq. 4+5

5. $\frac{dy}{dt} = t^5 e^{-at} \sin \omega t \left(\frac{5}{t} - a + \omega \cot \omega t \right)$

Similar questions: Notes 5, p. 7
Practical 5, q. 4

6. $x = 0$ and $x = 6/7$

Similar questions: Notes 6, p. 9
Practical 6, q. 1

7. The absolute maximum is 3 and the absolute minimum is -1.

Similar questions: Practical 6, qq. 2 + 8
Notes 6, p. 8