**Mathematical Methods Tutorial Sheet 4**

**Functions and Graphs Summer 2023 Q1 (a) and (b)**

**Q1. (a)** Given f(x) =4e0.25x and g(x) = 12 – 3x evaluate

**(i)** f(-2) **(3 marks)**

**(ii)** g(6) **(2 marks)**

**(iii)** f(g(2)) **(4 marks)**

**(iv)** g-1(3) **(3 marks)**

**(b)** By determining the period and the amplitude, **sketch** the graph of y=3cos2x for 0 ≤ x ≤ 360° clearly labelling your axes.

**(10 marks)**

**Matrices**

**Q1.** State the order of the following matrices:

A = B = C = D = E =

[ans: Order of A is 3x1, order of B is 2x2, order of C is 2x3, order of D is 1x2,

and order E is 3x2]

Q2. Given the following matrices

A = B = C = D =

Evaluate (i) A + C (ii) A + B

(iii) B – D (iv) 2A – 3C

[ans: (i) (ii) not conformable (iii) and (iv) ]