Problem 1

This problem has several parts:

(a) The first part.

(b) The second part.

(c) The third part.

Problem 2

For each of the following below, determine which option is correct.

  (i)   a) $2 \cdot 2 = 4$ b) $x^3 = x \cdot x$ c) $\sin x = \cos x$ d) $\sin x^2 = \sin^2 x$

  (ii)   a) $2 \cdot 2 = 4$ b) $x^3 = x \cdot x$ c) $\sin x = \cos x$ d) $\sin x^2 = \sin^2 x$

Problem 3

Compute the following integral:

$$\int e^{-x^2} \, dx$$