TMA MU123 02 – EXTRACT

Question 3 – 15 marks

This question is based on your work up to and including Unit 5.

(a) The length of material needed to make a cushion is given by
$L = 3w + 5$ where L is the length of material in cm and w is the width
of the cushion in cm. What length of material will be needed for a
cushion of width $0.4\,\text{m}$? [*3*]

(b) Evaluate the following expression when $a = -1$ and $b = -2$.

$b\left(a^2 - 4b\right)$ [*2*]

(c) Simplify the expression

$n + 5 - 4n - 9$ [*2*]

(d) (i) Simplify the expression

$a^2 - 2ba + ab + 2b^2$ [*2*]

(ii) Write down the coefficient of the term in ab in the simplified
version of the expression in part (i). [*1*]

(e) (i) In a greengrocer's shop, bananas are priced at 95p per kg. Find a
formula that can be used to calculate the cost of a purchase of any
number of kilograms of bananas. [*2*]

(ii) Customers are also charged 7p for a carrier bag. Amend your
formula to include the cost of a carrier bag. Then convert this
formula to give the total cost of the purchase in £s. [*3*]