Name: Tang Ming Foo, MAT Nabil B. MAT Kosim
Registration No: 05IPP18F1002, 05IPP18F1032
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Coursework Assessment: End of Chapter 1
Course Name: PBM 1035 ~~Mo~~ Intensive Mathematics

10/10 Good

Question 1

In each case, make x the subject of the formula. Simplify your answers if possible.

(a) $P = \frac{x}{2} + m$

$P - m = \frac{x}{2} + m - m$

$(P - m) = \frac{x}{2} \times (2)$

$2(P - m) = x$

$x = 2(P - m)$

(b) $k = \frac{1}{2} z x^2$

~~$2k = \frac{1}{2}(2) x y^2$~~ $2k = \frac{1}{2}(2) z x^2$

~~$\frac{2k}{y^2} = \frac{xy^2}{y^2}$~~ $\frac{2k}{z} = \frac{zx^2}{z}$

~~$\frac{2k}{y^2} = x$~~ $\frac{2k}{z} = x^2$

~~$x = 2k$~~ $x = \sqrt{\frac{2k}{z}}$

2

Question 2

Solve the equations

$$\frac{5}{x+6} = \frac{2}{2x+6}$$

$$x + 6(2) = 5(2x + 6)$$
$$2x + 12 = 10x + 30$$
$$2x - 10x + 12 - 12 = 10x - 10x + 30 - 12$$
$$-8x = 18$$
$$\frac{-8x}{-8} = -\frac{18}{8} \quad \frac{9}{4}$$
$$x = -\frac{9}{4}$$
$$x = -2\frac{1}{4}$$

2

$I = \frac{PkT}{100}$

I = Interest (利益) T = Year
P = Principal (资本)
R / k = Percentage

Question 3

A bank offers a simple interest rate of 5% per annum. John deposits RM 15000 in the bank. Calculate the interest that will receive after five years.

① $15000 \times \frac{5}{100} = 750$

② $15750 \times \frac{5}{100} = 787.5$

③ $16537.5 \times \frac{5}{100} = 826.9$

④ $17364.4 \times \frac{5}{100} = 868.2$

⑤ $18232.6 \times \frac{5}{100} = 911.6$

$I = \frac{PkT}{100}$

$I = \frac{15000 \times 5 \times 5}{100}$

$= \frac{375000}{100}$

$= 3750$

Deposits + Interest
RM 15000 + RM 3750
= RM 18750

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Question 4

RM5000 is deposited into a bank account by Pete with the annual interest rate of 4% and compounded once a year. Calculate the amount he will have after three years.

(1 years) RM5000 $\times \frac{4}{100}$ = RM200

(2 years) RM5200 $\times \frac{4}{100}$ = RM208

(3 years) RM5408 $\times \frac{4}{100}$ = RM216.3

3 years = RM200 + RM208 + RM216.3
= RM624.3

Deposited + 3 years = RM5000 + RM624.3
= RM5624.3

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Question 5

Solve the Simultaneous linear equation by using elimination method.

$$2x + 3y - 13 = 0$$
$$3x - y - 3 = 0$$

$2x + 3y - 13 = 0$

$(\times 3)\ 3x - y - 3 = 0$

$9x - 3y - 9 = 0$

$$2x + 3y = 13$$
$$-\ 9x - 3y = -9$$
$$-11x = 22$$
$$\frac{-11x}{-11} = \frac{22}{-11}$$
$$x = 2$$

$3x - y - 3$ $\times$ 3

$9x - 3y - 3$

$2(2) + 3y - 13 = 0$

$4 + 3y - 13 + 13 = 13$

$4 - 4 + 3y = 13 - 4$

$3y = 9$

$\frac{3y}{3} = \frac{9}{3}$

$y = 3$

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