DEPARTMENT OF MATHEMATICS
S.4 MATHEMATICS−2020
REVISION QUESTIONS
FACTORIZATION

1. Factorize the following completely

   (a) $x^2y - 9y$. (04 marks)

   (b) $1 - 4m^2$. (04 marks)

   (c) $-3t^2 + 48$. (04 marks)

   (d) $x^3 - 9xy^2$. (04 marks)

   (e) $xy - 6 + 2y - 3x$. (04 marks)

   (f) $x^4 - 1$. (04 marks)

   (g) $2\pi R^2 - 2\pi r^2$. (04 marks)

   (h) $n^4 - 4n^2$. (04 marks)

   (i) $(4 - x)(x + 2) - 3(x - 4)$. (04 marks)

   (j) $(3p + 2)^2 - 9$. (04 marks)

   (k) $9c^2 - (3 - c)^2$. (04 marks)

   (l) $(2n + 1)^2 - 4(n - 2)^2$. (04 marks)

   (m) $x^2 + 3x + 2$. (04 marks)

   (n) $9x^2 - 6x + 1$. (04 marks)

   (o) $-2x^2 - 8x - 8$. (04 marks)

   (p) $x^2 + 4xy + 3y^2$. (04 marks)

   (q) $a^2 - 5ab + 6b^2$. (04 marks)

   (r) $m^2 - 3mn + 2n^2$. (04 marks)

   (s) $2ab - 3 + 2ad - 3b$. (04 marks)

   (t) $2p + 2 + pq + q$. (04 marks)

   (u) $xy - 6 + 2y - 3x$. (04 marks)

   (v) $a^2 + 2ab - 1 + 2b$. (04 marks)

   (w) $x^2 + 2xy - 5x - 6y + 6$. (04 marks)

(x) $m^2 - 3mn - 4 + 6m$. *(04 marks)*

(y) $p^2 - pq - 3p + q + 2$. *(04 marks)*

(z) $4xy^2 - x^3 - yx^2 + 4y^3$. *(04 marks)*

2.   Without using a calculator or mathematical tables, evaluate $7.46^2 - 2.54^2$. *(04 marks)*

3.   Without using a calculator or mathematical tables, evaluate $0.2 \times 4.5^2 - 0.2 \times 5.5^2$. *(04 marks)*

4.   Without using a calculator or mathematical tables, evaluate $3.142^2 - 3.042 \times 3.142$. *(04 marks)*

5.   Without using a calculator or mathematical tables, evaluate $\dfrac{68.75^2 - 31.25^2}{3.75}$. *(04 marks)*

6.   Without using a calculator or mathematical tables, evaluate $\dfrac{21.35 \times 41.35 - 21.35^2}{0.02}$. *(04 marks)*

7.   Without using a calculator or mathematical tables, evaluate $\dfrac{30.25^2 - 30.15 \times 30.25}{0.0025}$. *(04 marks)*

8.   Given that $x^2 - y^2 = 135$ and $x - y = 9$, find the values of x and y. *(04 marks)*

9.   Factorize $x^2 - 6x + 8$ completely. Hence solve $x^2 - 6x + 8 = 0$. *(04 marks)*

10.   Factorize $2x^2 + x - 1$ completely. Hence solve $2x^2 + x - 1 = 0$. *(04 marks)*

11.   Factorize $4x - 1 - 3x^2$ completely. Hence solve $4x - 1 - 3x^2 = 0$. *(04 marks)*

By Opio Ismail

—END—