FORM 3 TERM 3
STRAND : **ALGEBRA**
TOPIC : **Factorisation of Algebraic Expressions**
KEY POINTS : binomial factorisation; factorisation of expressions involving sums and differences up to four terms

1) Factorise

   a) $3x + 3y$

   b) $5x - 10$

   c) $3y - 9y^2$

   d) $mx - my$

   e) $ab^3 - ab$

2) Factorise:

   a) $14a + 21b - 28c$

   b) $3x^3 - 6x^2y + 9xy^2$

   c) $\dfrac{x}{3} + \dfrac{y}{6} + \dfrac{z}{9}$

   d)
   $$\frac{m^2}{pn} - \frac{m^3}{pn^2} + \frac{m^4}{p^2n^2}$$

3) Factorise:

   a) $ax + ay + bx + by$

   b) $ax - by + ay - bx$

   c) $mp + np - mq - nq$

   d) $2ab - 6ac + xb - 3xc$

   e) $-y + x^2 - x + xy$

4) Factorise:

   a) $x^2 - 4$

   b) $x^2 - 25$

   c) $9x^2 - 16$

   d) $25x^2 - 16y^2$

Mr. Patrick Ramdath (CPDD)

ANSWERS
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1) a) $3(x + y)$

  b) $5(x - 2)$

  c) $3y(1 - 3y)$

  d) $m(x - y)$

  e) $ab(b^2 - 1)$

2) a) $7(2a + 3b - 4c)$

  b) $3x(x^2 - 2xy + 3y^2)$

  c) $\frac{1}{3}\left(\frac{x}{1} + \frac{y}{2} + \frac{z}{3}\right)$

  d)

$$\frac{m^2}{pn}\left(1 - \frac{m}{n} + \frac{m^2}{p\,n}\right)$$

3) a) $(a + b)\,(x + y)$

  b) $(a - b)\,(x + y)$

  c) $(m + n)\,(p - q)$

  d) $(2a + x)\,(b - 3c)$

  e) $(x - 1)\,(x + y)$

4) a) $(x + 2)(x - 2)$

  b) $(x + 5)(x - 5)$

  c) $(3x + 4)\,(3x - 4)$

  d) $(5x + 4y)\,(5x - 4y)$

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