Mark

Mathematics
Test (Ch.2 Identities and Factorization)

Name: _____( ) **Parent's signature:** _____

Class: _____ **Date:** _____

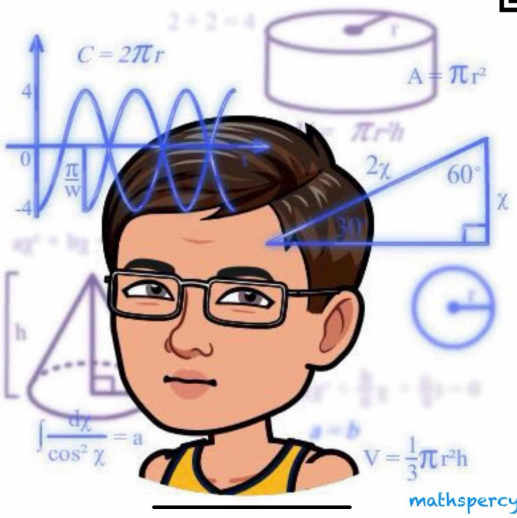
Part A: Multiple Choice
(Circle the best answer and each correct answer carries 2 marks.)

1. Which of the following is an identity?
   A. $x(x-1)=x^2-1$
   B. $3-(x-1)=4-x$
   C. $2x-2(1-x)=-2$
   D. $x^2-x(x+1)=1$

2. If A and B are constants such that $3(x+A)+2\equiv Bx-5(x+2)$, then
   A. $A=12, B=3$.
   B. $A=4, B=8$.
   C. $A=-4, B=8$.
   D. $A=-4, B=6$.

3. If $9x^2+\star+4\equiv(3x-2)^2$, then $\star=$
   A. $6x$.
   B. $12x$.
   C. $-6x$.
   D. $-12x$.

4. $(2a^2+b)(2a^2-b)=$
   A. $2a^2-b^2$
   B. $2a^4-b^2$
   C. $4a^4-b^2$
   D. $4a^4-b^4$



5. Determine whether each of the following is factorization or expansion.

(i) $(2x-1)(x+2)$

$= 2x^2+3x-2$

(ii) $2x^2-5x+2$

$= (2x-1)(x-2)$

	(i)	(ii)
A	Factorization	Expansion
B.	Expansion	Factorization
C.	Factorization	Factorization
D.	Expansion	Expansion

6. $3m(2m-5n)-(2m-5n)(n+2m) =$

A $(2m-5n)(m+n)$

B $(2m-5n)(m-n)$

$(2m-5n)(5m-n)$

$(5n-2m)(5m+n)$

Part B: Conventional Questions

7. Determine whether $(3x+2y)^2-24xy=(3x-2y)^2$ is an identity. (4 marks)

8. If $(x-5)(7x+A) \equiv x(Bx+C)-30$, where A, B and C are constants, find the values of A, B and C. (4 marks)

9. (a) Expand $(4x+y)(4x-y)$.

(b) Hence, expand $(4x+y)(4x-y)(16x^2+y^2)$. (2 marks)

10. (a) Factorize $64x^2 - 25y^2$.

(b) Hence, factorize $64x^2 - 25y^2 - 8x - 5y$.

(4 marks)

11. (a) Factorize $4x^2 - 20xy + 25y^2$.

(b) Hence, factorize $4x^2 - 20xy + 25y^2 + 10y - 4x$.

(4 marks)