Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Quadratics - Harder Factorising

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

Write your answers in the spaces provided in this question paper.

Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You should have a ruler, compass and protractor where required.

Total Marks :

1) Factorise fully the expression $3xy^2 + 9ay^2 - 36ab - 12xb$

Answer _____ [3]

2) Simplify fully

$$\frac{x^2 - 4xy + 4y^2}{3xy - 6y^2}$$

Answer_____[3]

3) **(a)** Expand and simplify $(3x + y)(x - 2y)$

Answer _____ [3]

(b) Hence simplify $\dfrac{3x^2 - 5xy - 2y^2}{9x^2 + 6xy + y^2}$

Answer _____ [3]

4) Simplify to its lowest terms $\dfrac{6x^2 + 21x + 9}{4x^2 - 1}$

Answer_____[3]

5) Factorise $xy + 4y + 5x + 20$

Answer _____ [2]

6)   What is reduced $\dfrac{x^2 - 4x + 4}{x^2 - 3x + 2}$ to its lowest terms?

Answer_____[3]

7) Simplify $\dfrac{2x^2 - 3xy + y^2}{4x - 2y}$

Answer _____ [3]

8) Simplify fully

$$\frac{x^2 + 8x + 16}{x + 3} \div \frac{2x + 8}{x^2 - 9}$$

Answer_____[3]

9) Simplify $\dfrac{x^2 + 3xy - 5x - 15y}{2x^2 - 10x}$ fully.

Answer _____ [4]