

Factorising

For AQA Level 2 Certificate in Further Mathematics (8365)

Name _____

Total marks: **26**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

1 Factorise fully

(a) $20p^2 - 15p^3$

[2 marks]

Answer _____

(b) $8m^2n^3 + 12mn^2$

[2 marks]

Answer _____

2 Which of these is a factorisation of $16x^2 - 81y^2$?
Circle your answer.

[1 mark]

$(4x - 9y)^2$

$(4x + 9y)(4x - 9y)$

$(8x + 9y)(2x - 9y)$

$(16x - 81y)(x + y)$

3 Factorise

(a) $5x^2 + 17x + 6$

[2 marks]

Answer _____

(b) $10x^2 - 11xy - 6y^2$

[2 marks]

Answer _____

4 Factorise fully

(a) $18y^2 - 32$

[2 marks]

Answer _____

(b) $2x^5 - 32x$

[3 marks]

Answer _____

5 Factorise fully $(5x - 1)^2 - (x + 3)^2$

[3 marks]

Answer _____

6 Factorise fully $x(x + 5)^4 - 6(x + 5)^3$

[3 marks]

Answer _____

7 Solve $6x^3 + 7x^2 - 20x = 0$
You must show your working.

[3 marks]

Answer _____

8 Solve $2\cos^2 x + \cos x - 1 = 0$ for $0^\circ \leq x \leq 360^\circ$
You must show your working.

[3 marks]

Answer _____