

AQA, OCR, Edexcel

GCSE

GCSE Maths

Factorising Answers

Name:

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Total Marks: /32

Factorising

1. Factorise the following expressions:

a. $6x + 4$

b. $6x + 12$

c. $3x - 15$

d. $9x - 18$

e. $7x - 28$

f. $10x + 8$

g. $7x - 56$

h. $20x + 15$

$a = 2(3x + 2)$

$b = 6(x + 2)$

$c = 3(x - 5)$

$d = 9(x - 2)$

$e = 7(x - 4)$

$f = 2(5x + 4)$

$g = 7(x - 8)$

$h = 5(4x + 3)$

(8 marks)

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2. Factorise the following expressions:

a. $6x^2 + 4x$

b. $6x^2 + 18x$

c. $6x^2 + 10x$

d. $6x^2 + 14x$

e. $16x^2 - 12x$

f. $12x^2 + 6x$

g. $12x^2 - 21x$

h. $21x^2 - 35x$

$a = 2x(3x + 2)$

$b = 6x(x + 3)$

$c = 2x(3x + 5)$

$d = 2x(3x + 7)$

$e = 4x(4x - 3)$

$f = 6x(2x + 1)$

$g = 3x(4x - 7)$

$h = 7x(3x - 5)$

(8 marks)

3. Factorise the following expressions:

a. $4a^2 - 9b^2$

b. $16x^2 - 25y^2$

c. $5x^2 - 125y^2$

d. $6x^2 - 54y^2$

e. $x^2 - 6$

$$a = (2a - 3b)(2a + 3b)$$

$$b = (4x - 5y)(4x + 5y)$$

$$c = 5(x + 5y)(x - 5y)$$

$$d = 6(x + 3y)(x - 3y)$$

$$e = (x + \sqrt{6})(x - \sqrt{6})$$

(10 Marks)

4. Simplify the following quotients:

a. $\frac{x^2 - 49}{x + 7}$

b. $\frac{x^2 - 36}{x - 6}$

c. $\frac{x^2 + 9x + 20}{x + 4}$

$$a = x - 7$$

$$b = x + 6$$

$$c = x + 5$$

(6 Marks)