

Now
Revise

Routine – Non
Calculator

Brackets & Factorising
Expressions and Formulae 1.2

(a) Factorise

$$x^2 - 4y^2.$$

1

(b) Expand and simplify

$$(2x - 1)(x + 4).$$

Factorise fully

$$2m^2 - 18.$$

2

Expand and simplify

$$(3x - 2)(2x^2 + x + 5).$$

3

Multiply out the brackets and collect like terms.

$$(x + 3)(x^2 + 4x - 12)$$

4

Factorise

$$x^2 - 5x - 24.$$

5

Multiply out the brackets and collect like terms.

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

6

7

Multiply out the brackets and collect like terms.

$$(3x + 2)(x - 5) + 8x$$

8

(a) Factorise

$$x^2 + x - 6.$$

(b) Multiply out the brackets and collect like terms.

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

9

Multiply out the brackets and collect like terms.

$$5x + (3x + 2)(2x - 7)$$

10

Remove brackets and simplify

$$(2x + 3)^2 - 3(x^2 - 6).$$

11

Factorise fully

$$5x^2 - 45.$$

12

Given that

$$x^2 - 10x + 18 = (x - a)^2 + b,$$

find the values of a and b .

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Expand fully and simplify

13

$$x(x - 1)^2.$$

Expand and simplify

14

$$(3x + 1)(x^2 - 5x + 4).$$

Multiply out the brackets and collect like terms.

15

$$(3x - 5)(x^2 + 2x - 6)$$

**Now
Revise**

Unseen and
Non Routine

Brackets & Factorising
Expressions and Formulae 1.2

(a) Factorise

$$x^2 - y^2.$$

16

(b) Hence, or otherwise, find the value of

$$9 \cdot 3^2 - 0 \cdot 7^2.$$

(a) Factorise

$$a^2 + 2ab + b^2.$$

17

(b) Hence, or otherwise, find the value of

$$94^2 + 2 \times 94 \times 6 + 6^2.$$

Expand

$$x^{\frac{1}{2}}(3x + x^{-2}).$$

18

(a) Factorise **fully**

$$2x^2 - 18.$$

19

(b) Simplify

$$\frac{(2x+5)^2}{(2x-1)(2x+5)}.$$