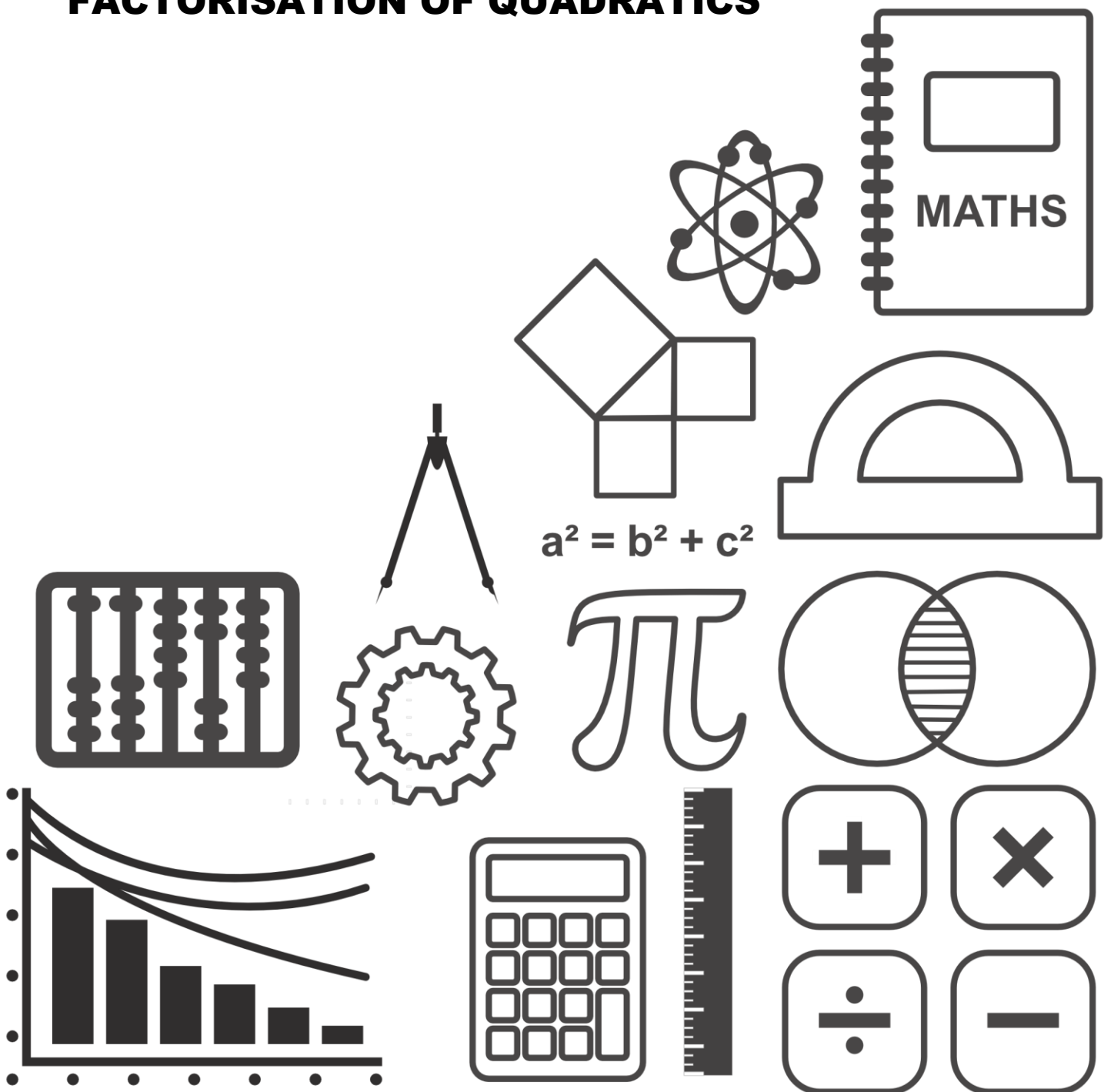


## GCSE TOPIC BOOKLET FACTORISATION OF QUADRATICS



1. (a) Factorise  $x^2 - 6x + 8$ . [2]

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(b) Factorise  $12x^2 - 27y^2$ . [3]

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2. Factorise each of the following expressions.

(a)  $x^2 + 2x - 8$ . [2]

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(b)  $x^2 - x - 42$ . [2]

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(c)  $15x^2 + 31x + 14$  [2]

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3.

(a) Factorise the following expressions.

(i)  $x^2 - 3x - 10$ . [2]

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(ii)  $x^2 - 100$  [1]

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(b) Factorise  $x^2 - 5x - 14$  [2]

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4.

(a) Factorise  $6x^2 + 13x - 5$ . [2]

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(b) Factorise

(i)  $9q^2 - 100$ ,

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[2]

(ii)  $3q^2 + 4q - 20$ .

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[2]

5.

(a) Factorise  $16x^2 - 1$ .

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[2]

(b) Factorise  $4x^2 - 1600$ .

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[3]

(c) Factorise

(i)  $x^2 - 2x - 15$ ,

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[2]

(ii)  $x^2 + 4x - 21$ .

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[2]

Show that the expression  $4x^2 - 20x + 25$  can be written in the form  $(ax - b)^2$ .

6.

(a) Write down the values of  $a$  and  $b$ .

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[3]

(b) Factorise  $x^2 - 16$ .

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[1]

(c) Factorise  $x^2 - 8x + 15$ .

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