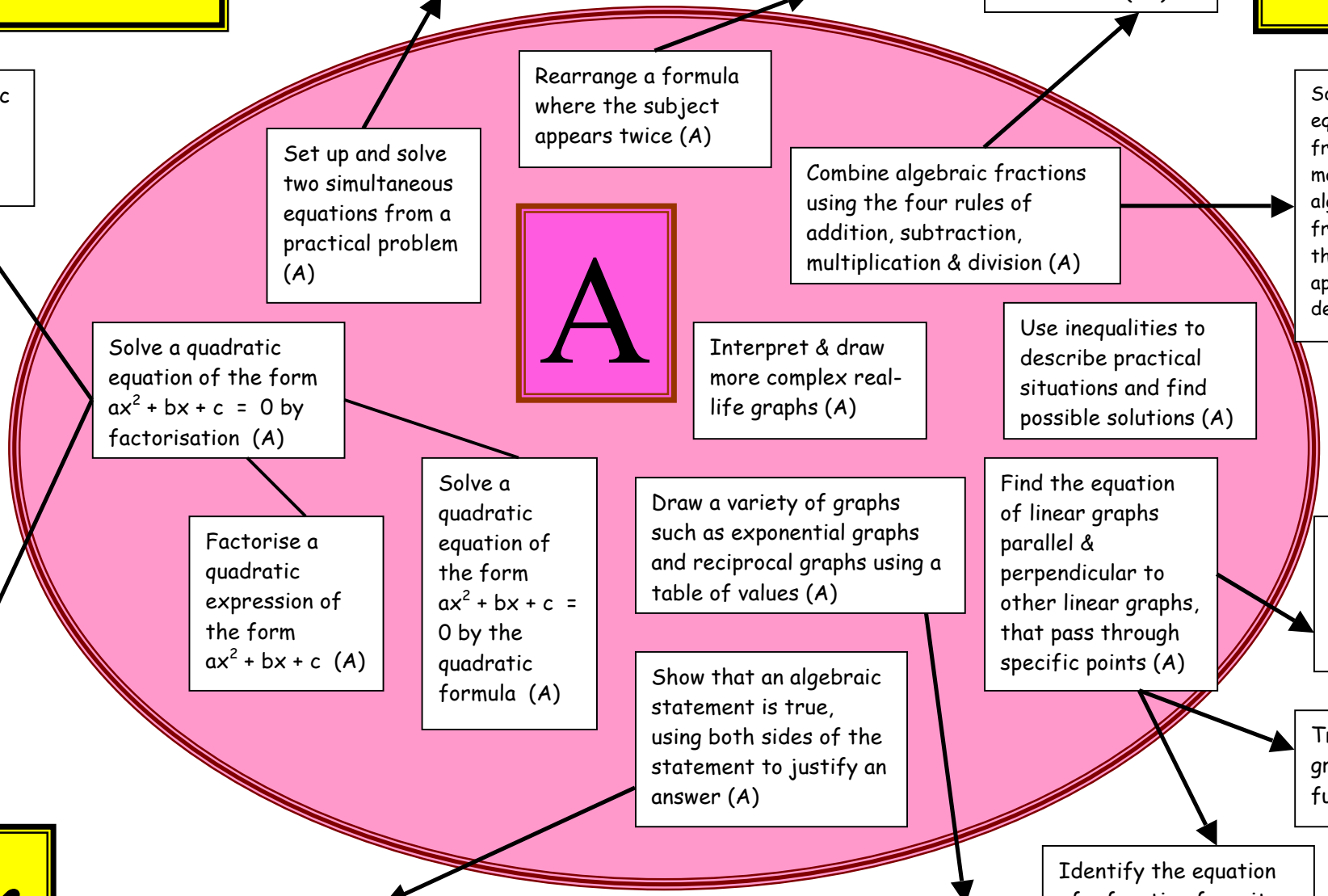
Algebra
Moving from A to A*



Solve a pair of simultaneous equations where one is linear and the other is non-linear (A*)

Rearrange m ore complicated formulae where the subject may appear twice or as a power (A*)

Simplify algebraic fractions by factorisation and cancellation (A*)

A*

Solve a quadratic equation using completing the square (A*)

Rearrange a formula where the subject appears twice (A)

Set up and solve two simultaneous equations from a practical problem (A)

Combine algebraic fractions using the four rules of addition, subtraction, multiplication & division (A)

Solve a quadratic equation obtained from manipulating algebraic fractions where the variable appears in the denominator (A*)

Solve a quadratic equation of the form $ax^2 + bx + c = 0$ by factorisation (A)

Interpret & draw more complex real-life graphs (A)

Use inequalities to describe practical situations and find possible solutions (A)

Solve real life problems that lead to constructing & solving a quadratic equation (A*)

Factorise a quadratic expression of the form $ax^2 + bx + c$ (A)

Solve a quadratic equation of the form $ax^2 + bx + c = 0$ by the quadratic formula (A)

Draw a variety of graphs such as exponential graphs and reciprocal graphs using a table of values (A)

Find the equation of linear graphs parallel & perpendicular to other linear graphs, that pass through specific points (A)

Solve equations using the intersection of two graphs (A*)

Show that an algebraic statement is true, using both sides of the statement to justify an answer (A)

Transform the graph of a given function (A*)

A*

Prove algebraic & geometric results with rigorous and logical mathematical arguments (A*)

Use trigonometric graphs to solve sine and cosine problems (A*)

Identify the equation of a function from its graph, which has been formed by a transformation on a known function (A*)

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Algebra
Moving from B to A

Set up and solve two simultaneous equations from a practical problem (A)

Interpret & draw more complex real-life graphs (A)

Rearrange a formula where the subject appears twice (A)

Combine algebraic fractions using the four rules of addition, subtraction, multiplication & division (A)

Solve a quadratic equation of the form $ax^2 + bx + c = 0$ by factorisation (A)

Solve two simultaneous linear equations (B)

Rearrange more complicated formulae (B)

Use inequalities to describe practical situations and find possible solutions (A)

Represent a region that satisfies a linear inequality graphically (B)

Solve more complex linear inequalities (B)

Solve a quadratic equation of the form $ax^2 + bx + c = 0$ by the quadratic formula (A)

Solve a quadratic equation of the form $x^2 + bx + c = 0$ (B)

B

Able to interpret real life graphs (B)

Represent a region that simultaneously satisfies more than one linear inequality graphically (B)

Solve linear equations involving algebraic fractions where the subject appears as the numerator (B)

Factorise a quadratic expression of the form $x^2 + bx + c$ (B)

Plot cubic graphs using a table of values (B)

A

Proof: Able to verify results by substituting numbers into them (B)

Find the *n*th term of a quadratic sequence (B)

Recognise the shapes of the graphs $y = x^3$ and $y = 1/x$ (B)

Solve quadratic equations from their graphs (B)

Factorise a quadratic expression of the form $ax^2 + bx + c$ (A)

Understand the proofs of simple theorems such as an exterior angle of a triangle is the sum of the two opposite interior angles (B)

Solve a pair of linear simultaneous equations from their graphs (B)

Find the equation of linear graphs parallel & perpendicular to other linear graphs, that pass through specific points (A)

A

Show that an algebraic statement is true, using both sides of the statement to justify an answer (A)

Draw a variety of graphs such as exponential graphs and reciprocal graphs using a table of values (A)

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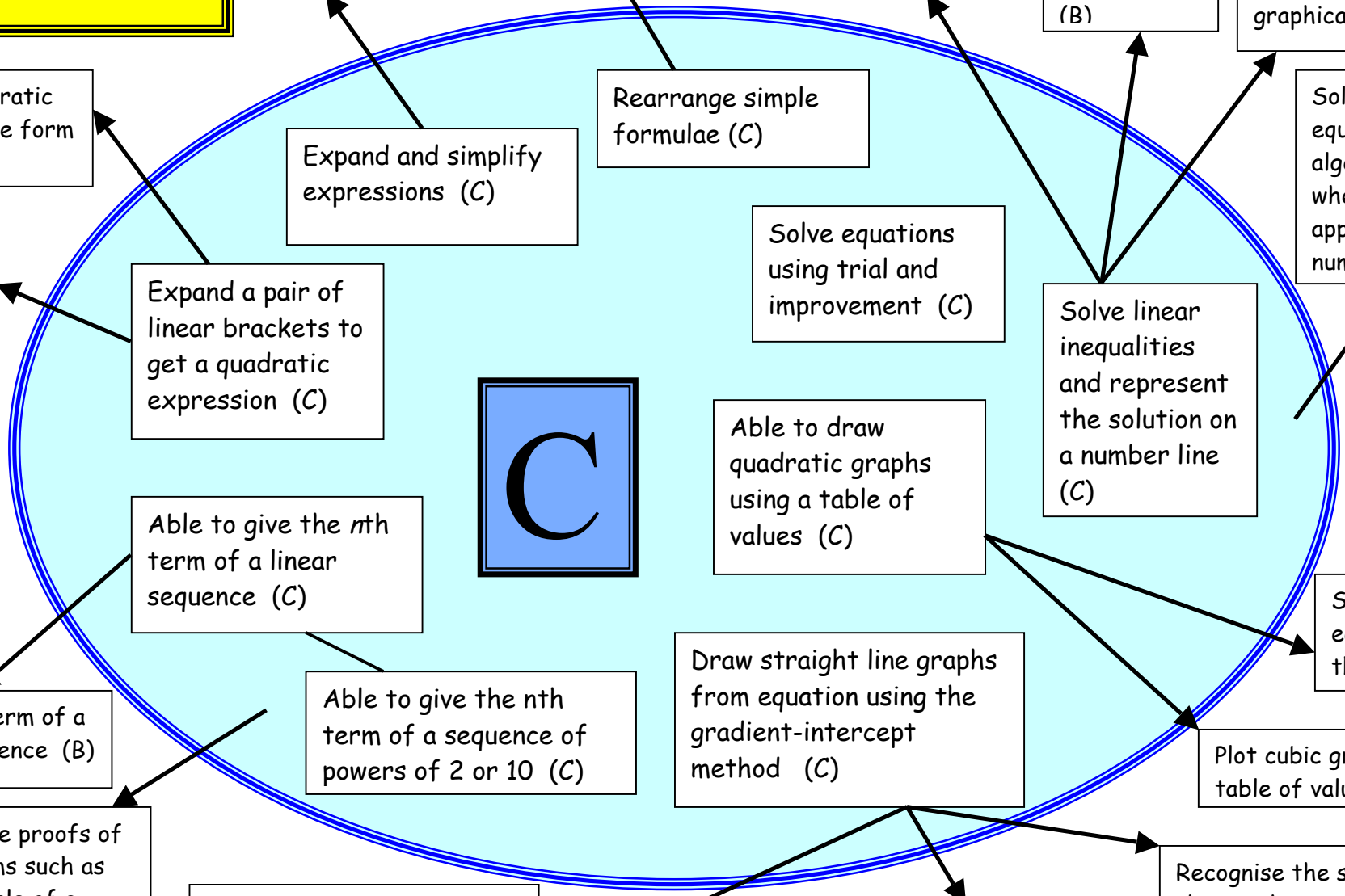
Algebra
Moving from C to B



C

Solve two simultaneous linear equations (B)

Rearrange more complicated formulae (B)

Represent a region that satisfies a linear inequality graphically (B)

Solve more complex linear inequalities (B)

Represent a region that simultaneously satisfies more than one linear inequality graphically (B)

Factorise a quadratic expression of the form $x^2 + bx + c$ (B)

Expand and simplify expressions (C)

Rearrange simple formulae (C)

Solve linear equations involving algebraic fractions where the subject appears as the numerator (B)

Solve a quadratic equation of the form $x^2 + bx + c = 0$ (B)

Expand a pair of linear brackets to get a quadratic expression (C)

Solve equations using trial and improvement (C)

Solve linear inequalities and represent the solution on a number line (C)

B

B

Able to give the *n*th term of a linear sequence (C)

Able to draw quadratic graphs using a table of values (C)

Solve quadratic equations from their graphs (B)

Find the *n*th term of a quadratic sequence (B)

Able to give the nth term of a sequence of powers of 2 or 10 (C)

Draw straight line graphs from equation using the gradient-intercept method (C)

Plot cubic graphs using a table of values (B)

Understand the proofs of simple theorems such as an exterior angle of a triangle is the sum of the two opposite interior angles (B)

Proof: Able to verify results by substituting numbers into them (B)

Interpret real life graphs (B)

Solve a pair of linear simultaneous equations from their graphs (B)

Recognise the shapes of the graphs $y = x^3$ and $y = 1/x$ (B)

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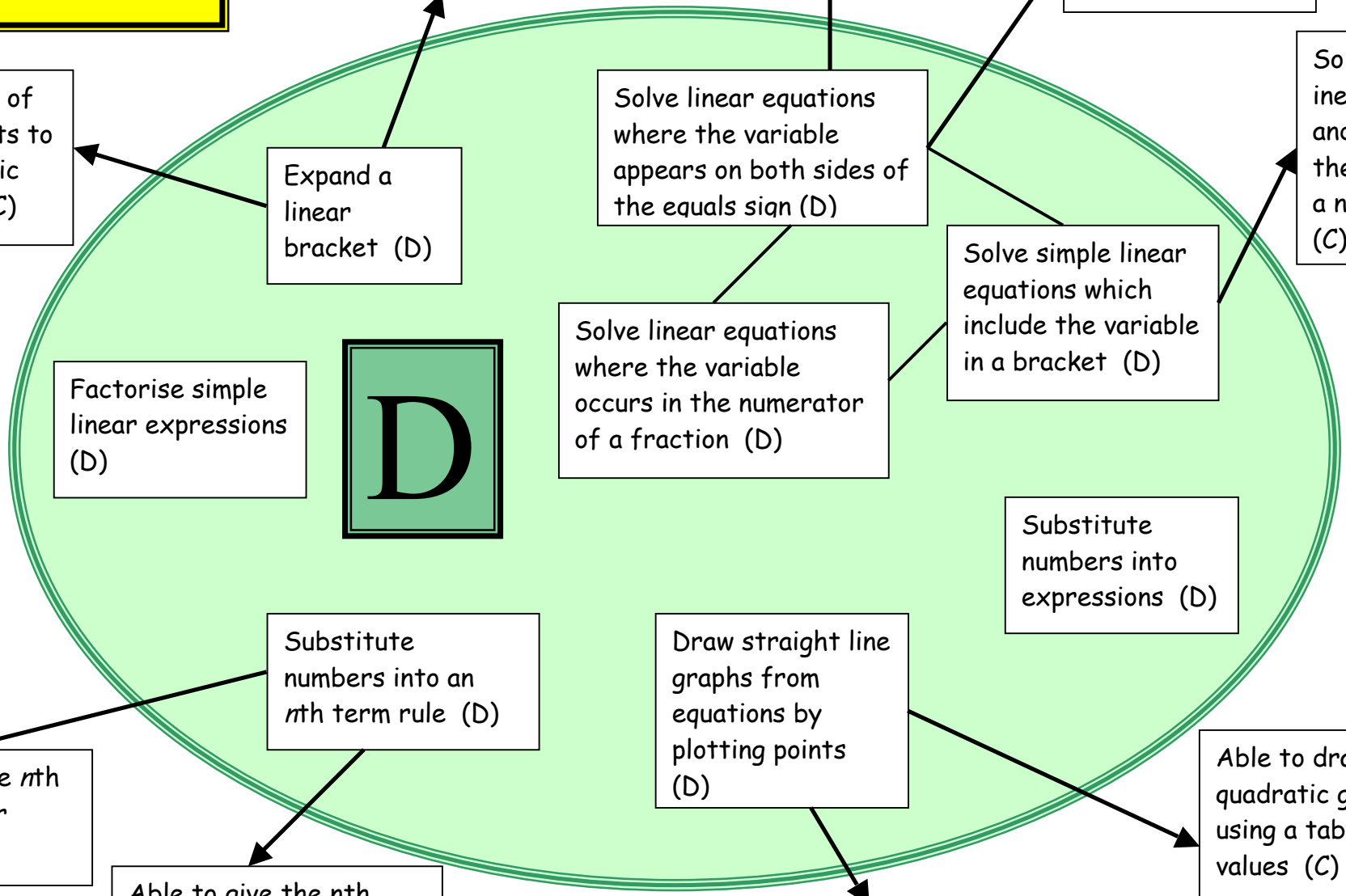
Algebra
Moving from D to C



C

C

Expand and simplify expressions (C)

Rearrange simple formulae (C)

Solve equations using trial and improvement (C)

Expand a pair of linear brackets to get a quadratic expression (C)

Expand a linear bracket (D)

Solve linear equations where the variable appears on both sides of the equals sign (D)

Solve linear inequalities and represent the solution on a number line (C)

Solve simple linear equations which include the variable in a bracket (D)

Solve linear equations where the variable occurs in the numerator of a fraction (D)

Factorise simple linear expressions (D)

Substitute numbers into expressions (D)

Substitute numbers into an *n*th term rule (D)

Able to give the *n*th term of a linear sequence (C)

Able to give the nth term of a sequence of powers of 2 or 10 (C)

Draw straight line graphs from equations by plotting points (D)

Able to draw quadratic graphs using a table of values (C)

Draw straight line graphs from equation using the gradient-intercept method (C)

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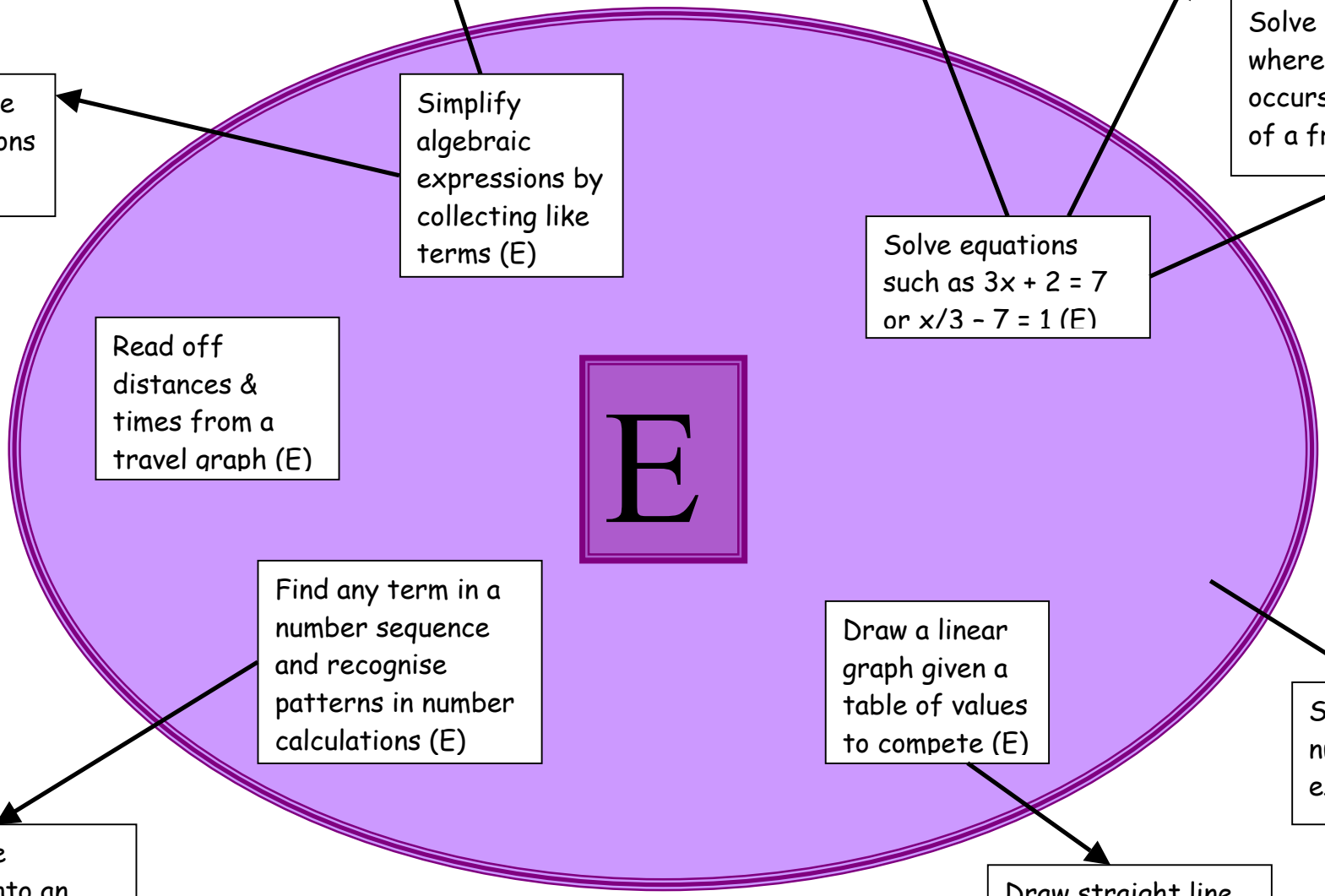
Algebra
Moving from E to D



Expand a linear bracket (D)

Solve linear equations where the variable appears on both sides of the equals sign (D)

Solve simple linear equations which include the variable in a bracket (D)

Solve linear equations where the variable occurs in the numerator of a fraction (D)

Factorise simple linear expressions (D)

Simplify algebraic expressions by collecting like terms (E)

Solve equations such as 3x + 2 = 7 or x/3 – 7 = 1 (E)

D

Read off distances & times from a travel graph (E)

D

Find any term in a number sequence and recognise patterns in number calculations (E)

Draw a linear graph given a table of values to compete (E)

Substitute numbers into expressions (D)

Substitute numbers into an *n*th term rule (D)

Draw straight line graphs from equations by plotting points (D)

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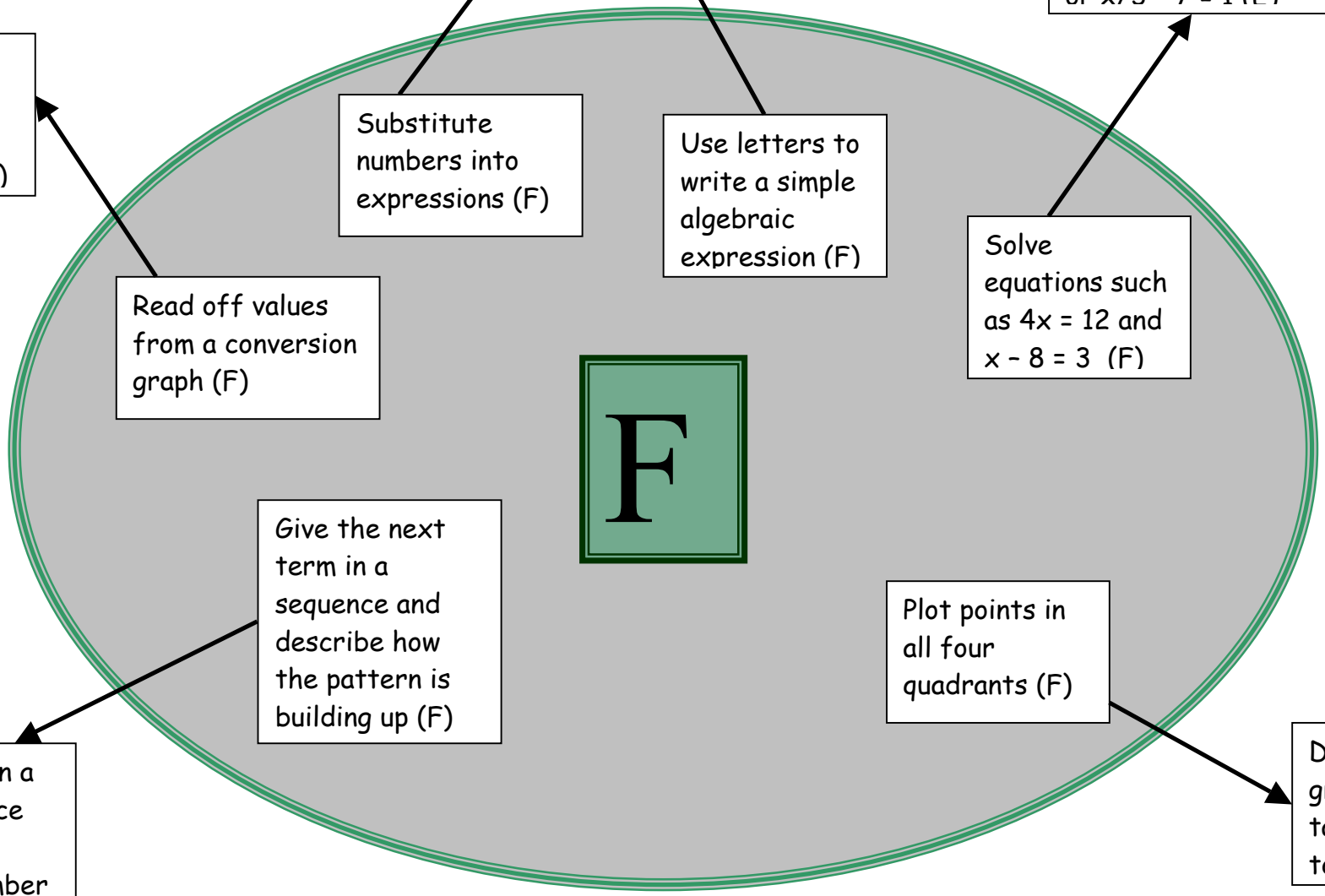
Algebra
Moving from F to E



Simplify algebraic expressions by collecting like terms (E)

Solve equations such as 3x + 2 = 7 or x/3 – 7 = 1 (E)

Read off distances & times from a travel graph (E)

Substitute numbers into expressions (F)

Use letters to write a simple algebraic expression (F)

E

Read off values from a conversion graph (F)

Solve equations such as 4x = 12 and x – 8 = 3 (F)

E

F

Give the next term in a sequence and describe how the pattern is building up (F)

Plot points in all four quadrants (F)

Find any term in a number sequence and recognise patterns in number calculations (E)

Draw a linear graph given a table of values to compete (E)

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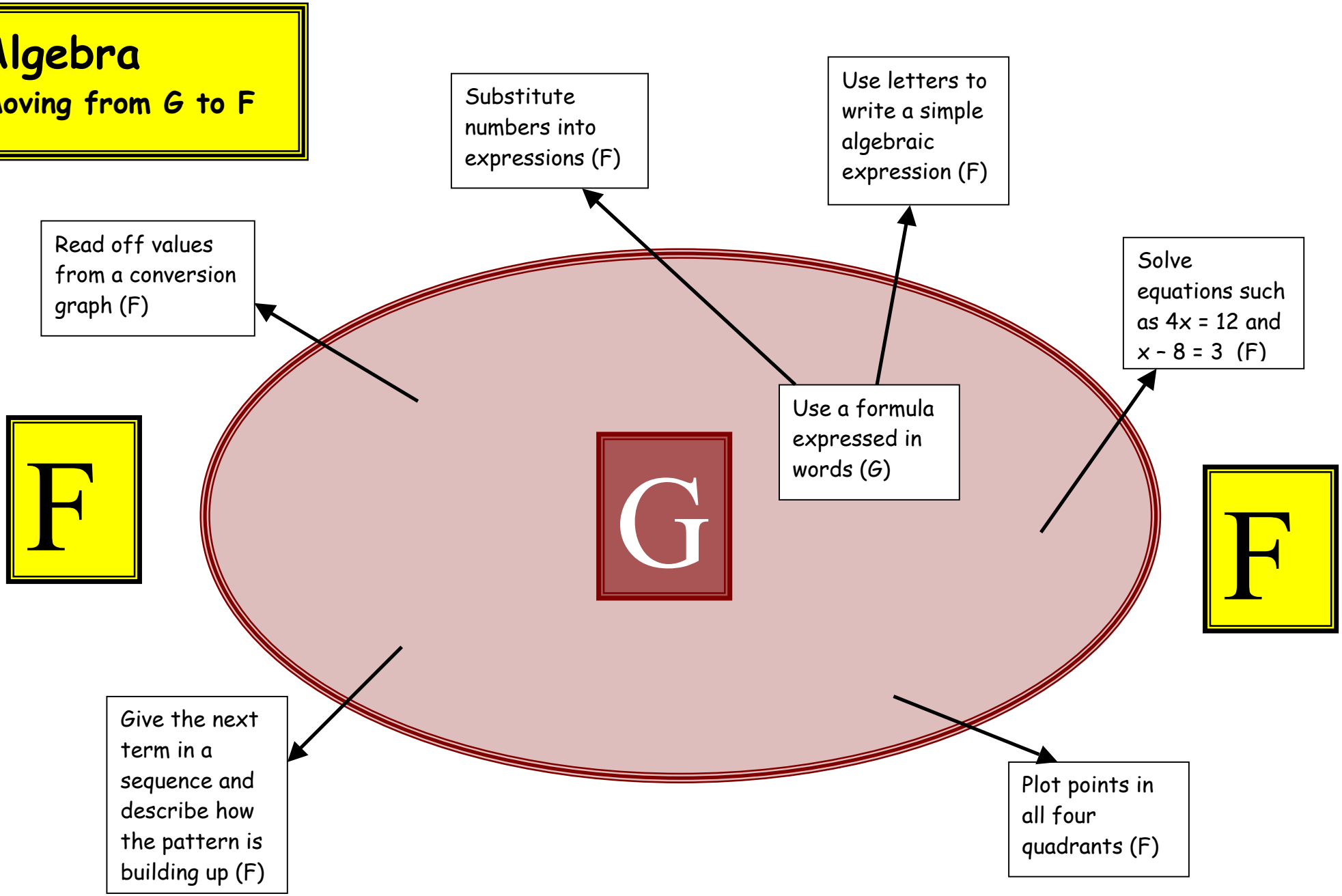
Algebra
Moving from G to F



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