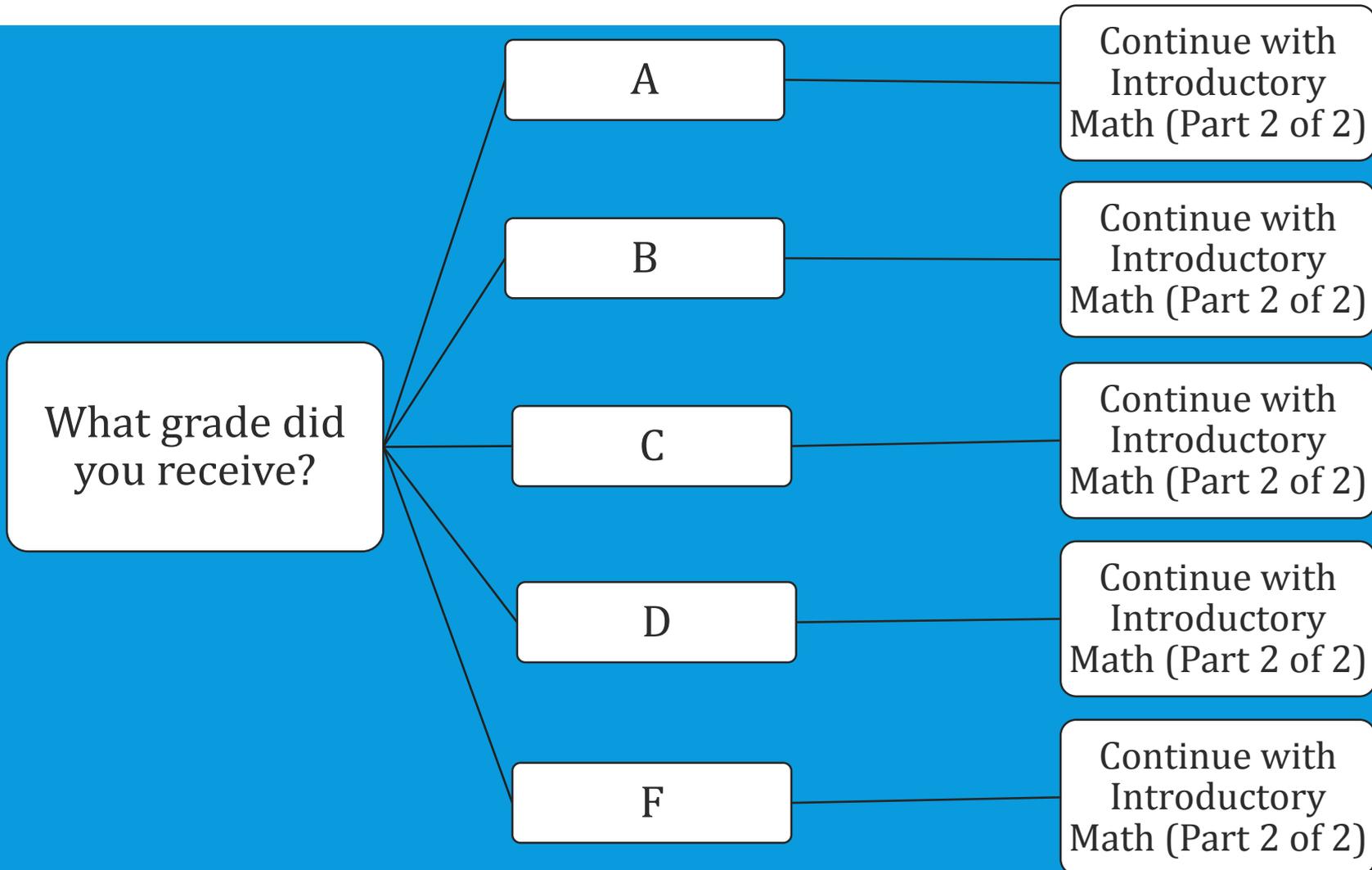


MATH RECOMMENDATION CHART

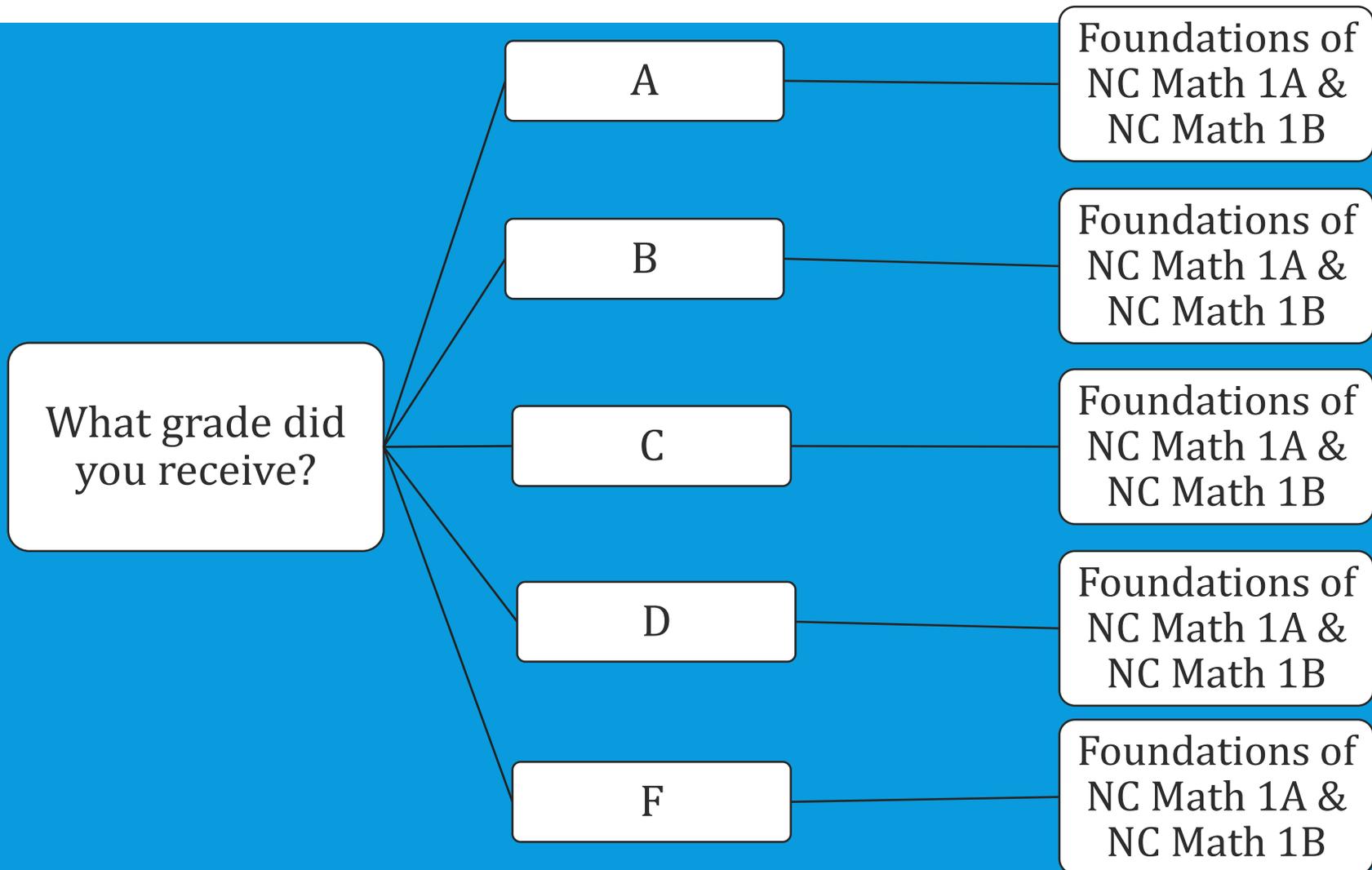
For School Year 2017 – 2018

Note: Students pursuing college athletics should talk to their counselor about the ECM 4th Math course.

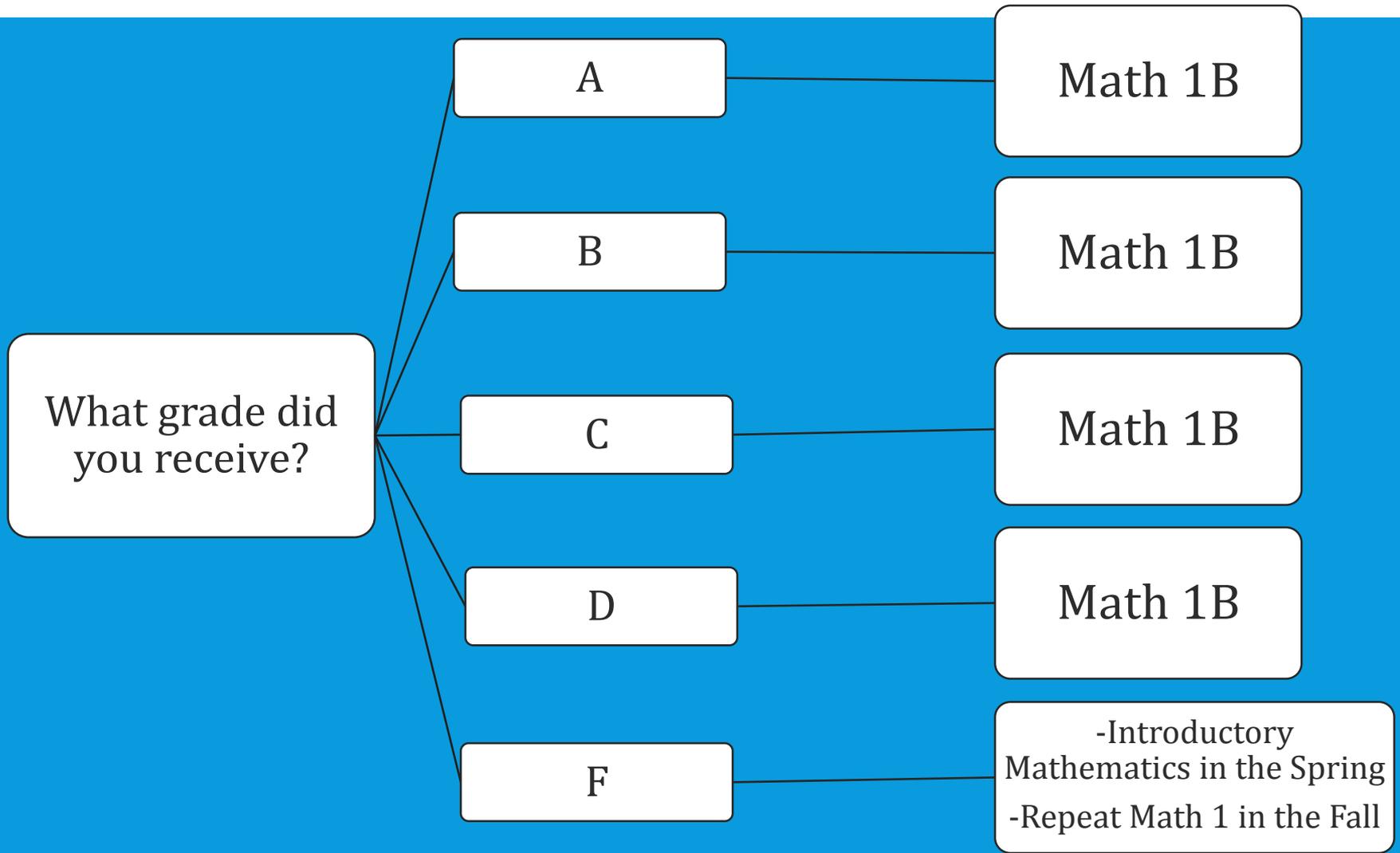
FUNDAMENTALS OF MATH (PART 1 OF 2)



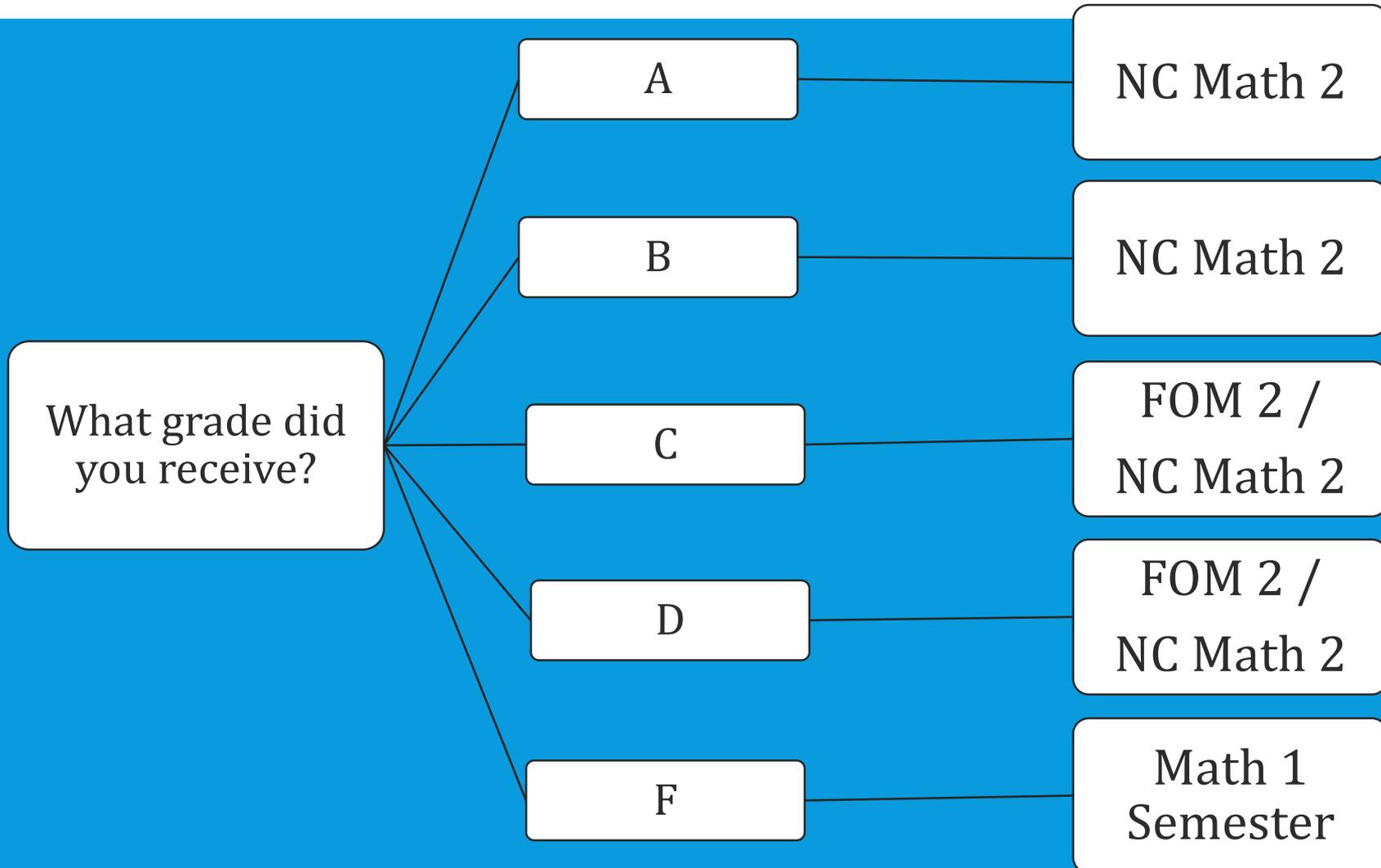
INTRODUCTORY MATHEMATICS (PART 2 OF 2)



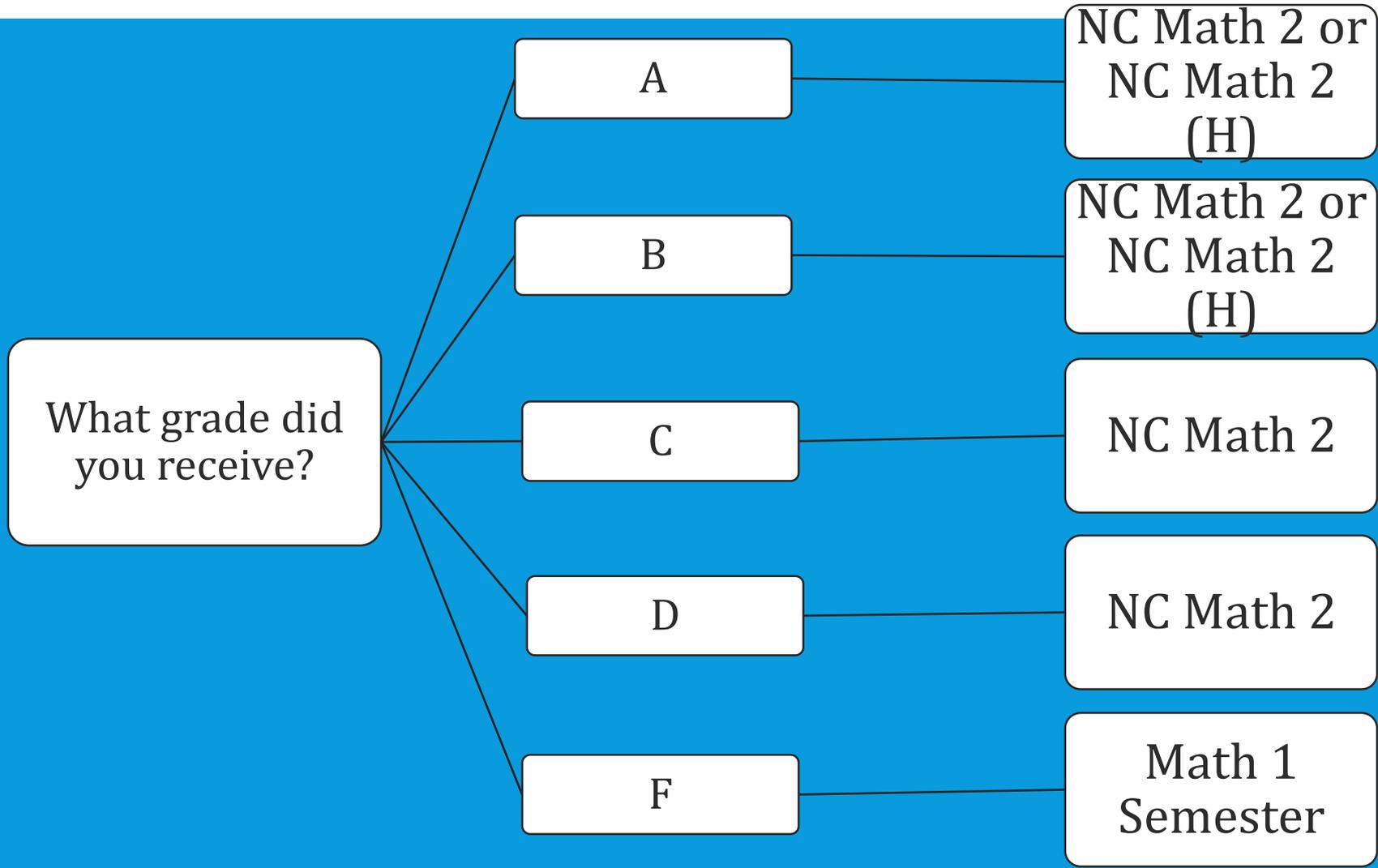
FOUNDATIONS OF NC MATH 1 (NC MATH 1A)



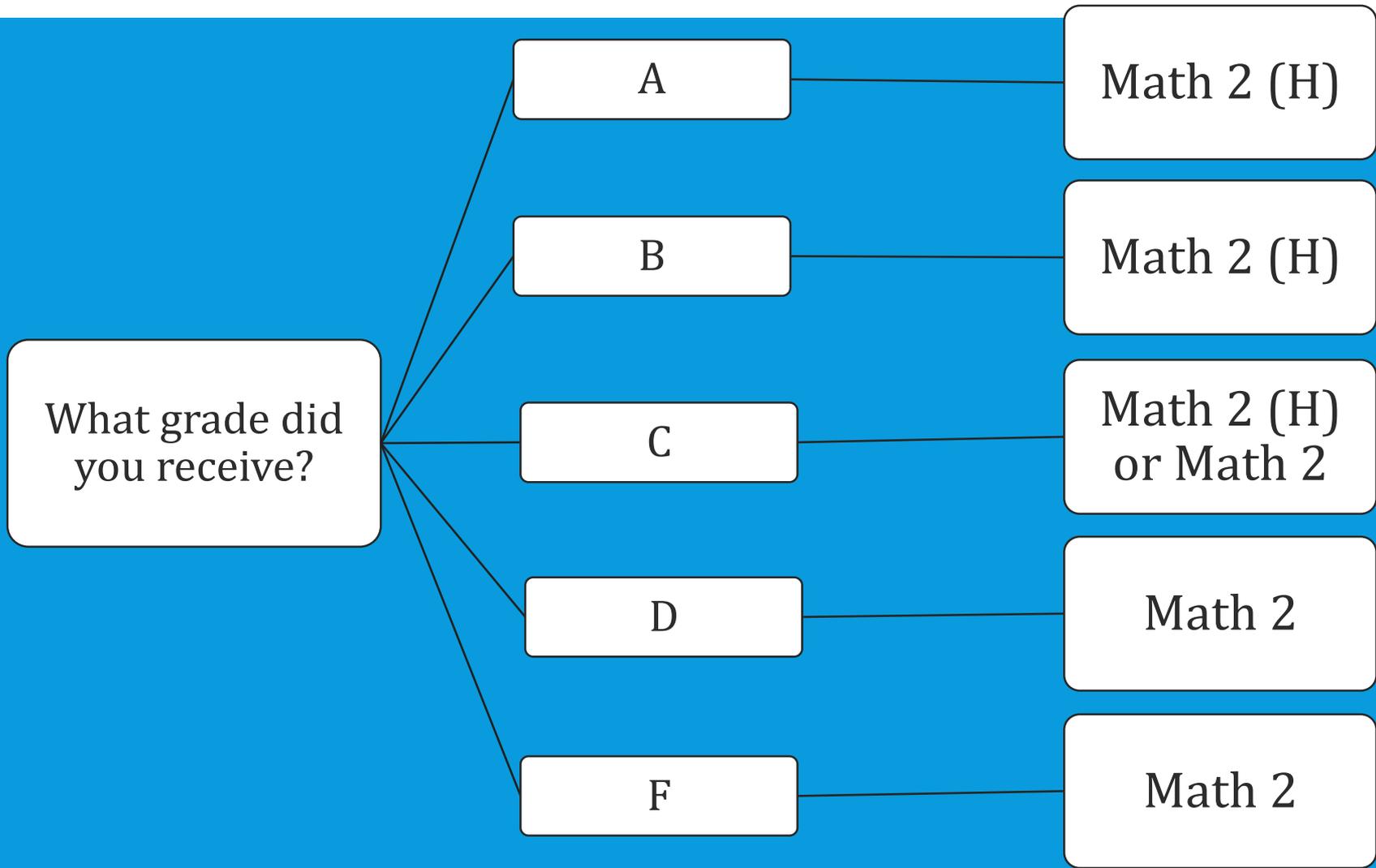
NC MATH 1B



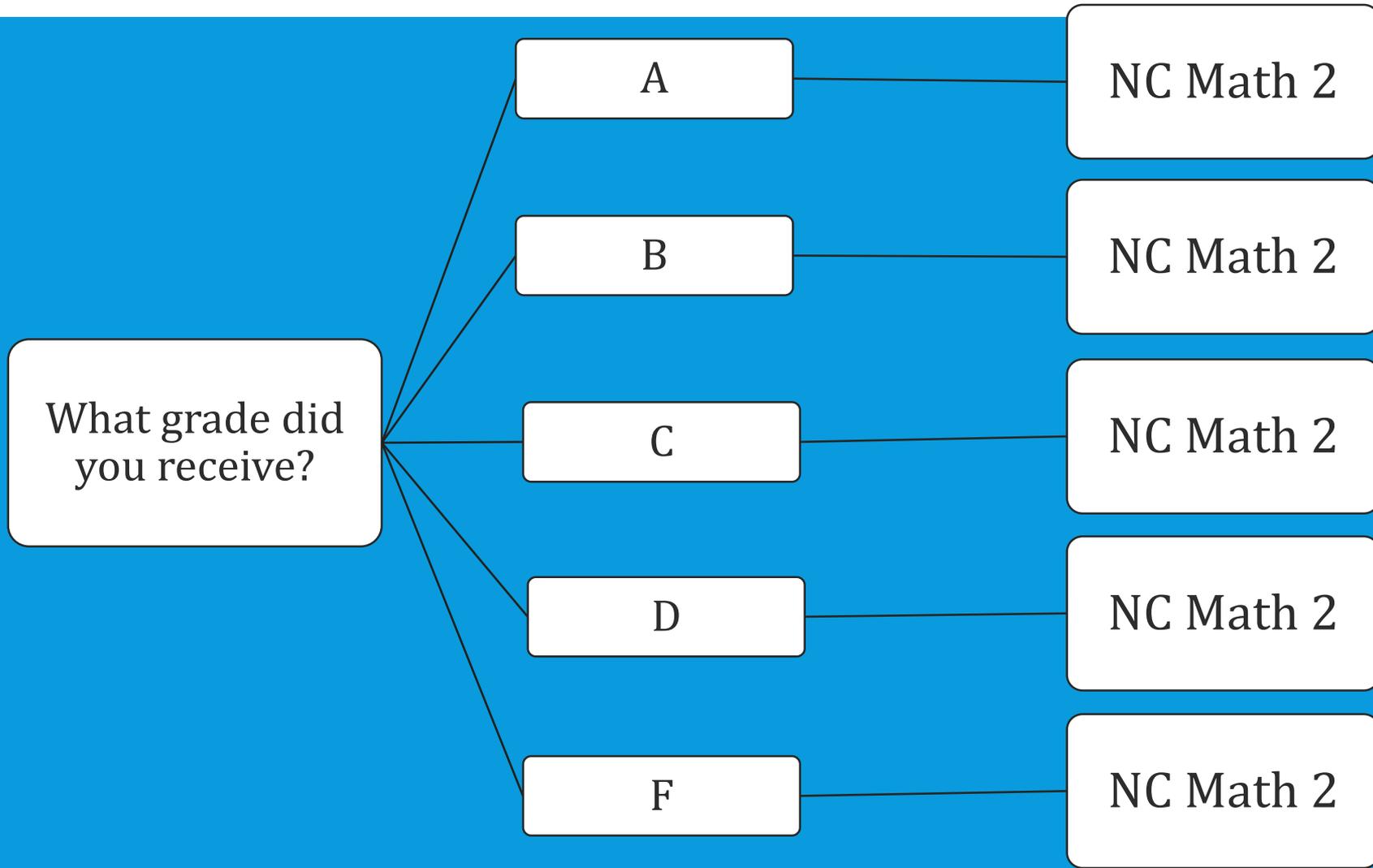
MATH 1 (SEMESTER)



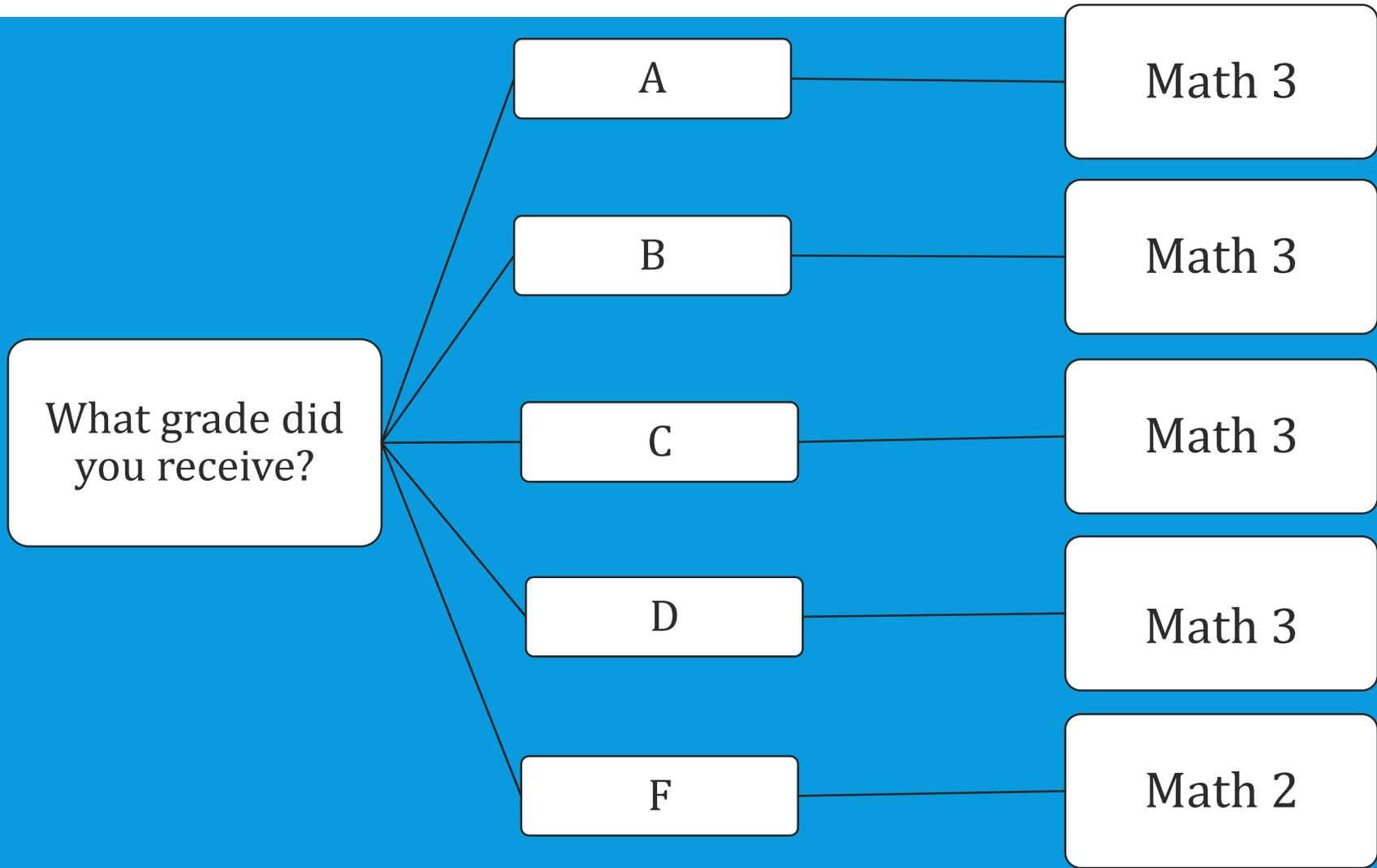
MATH PLUS HONORS



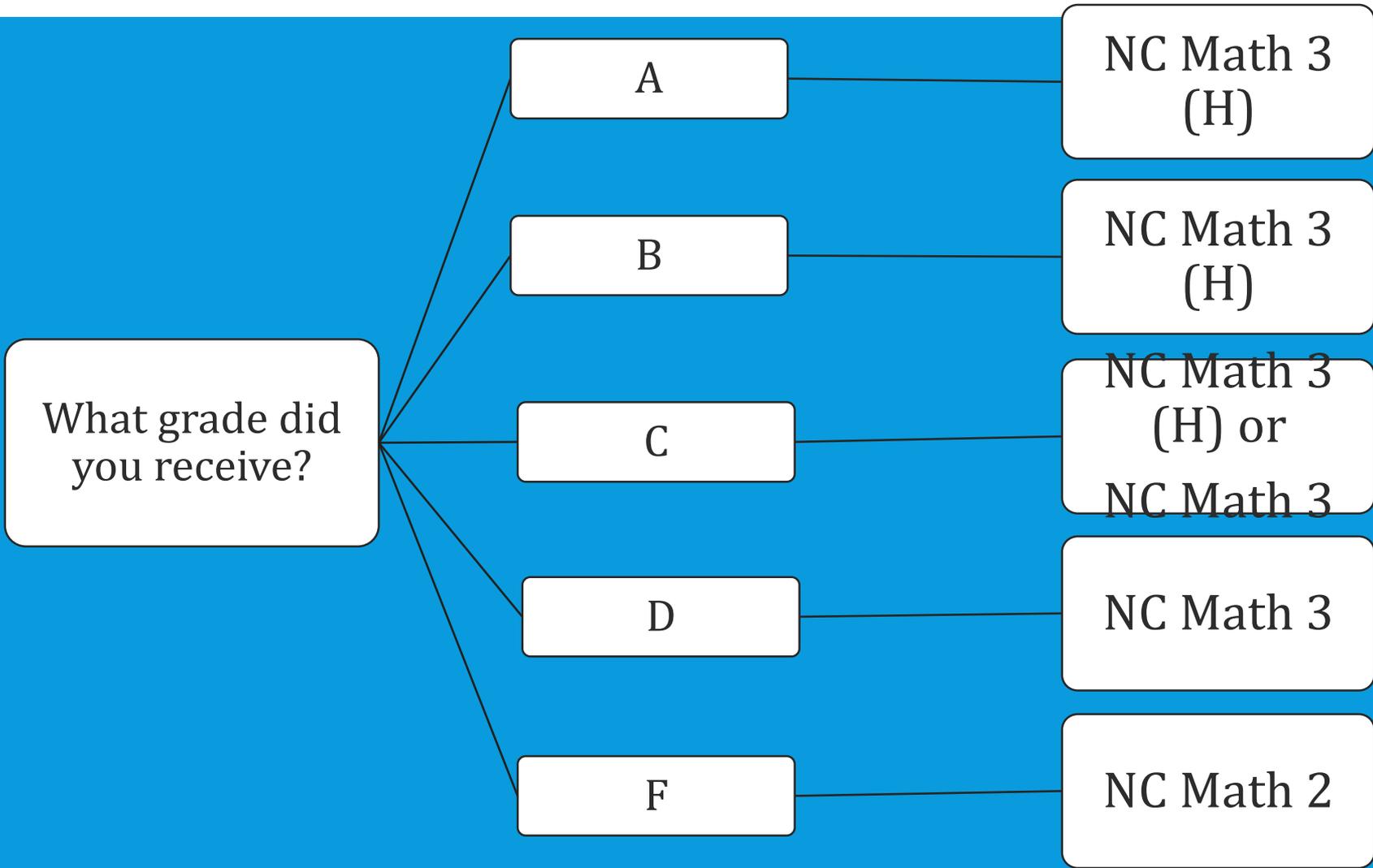
FOUNDATIONS OF NC MATH 2



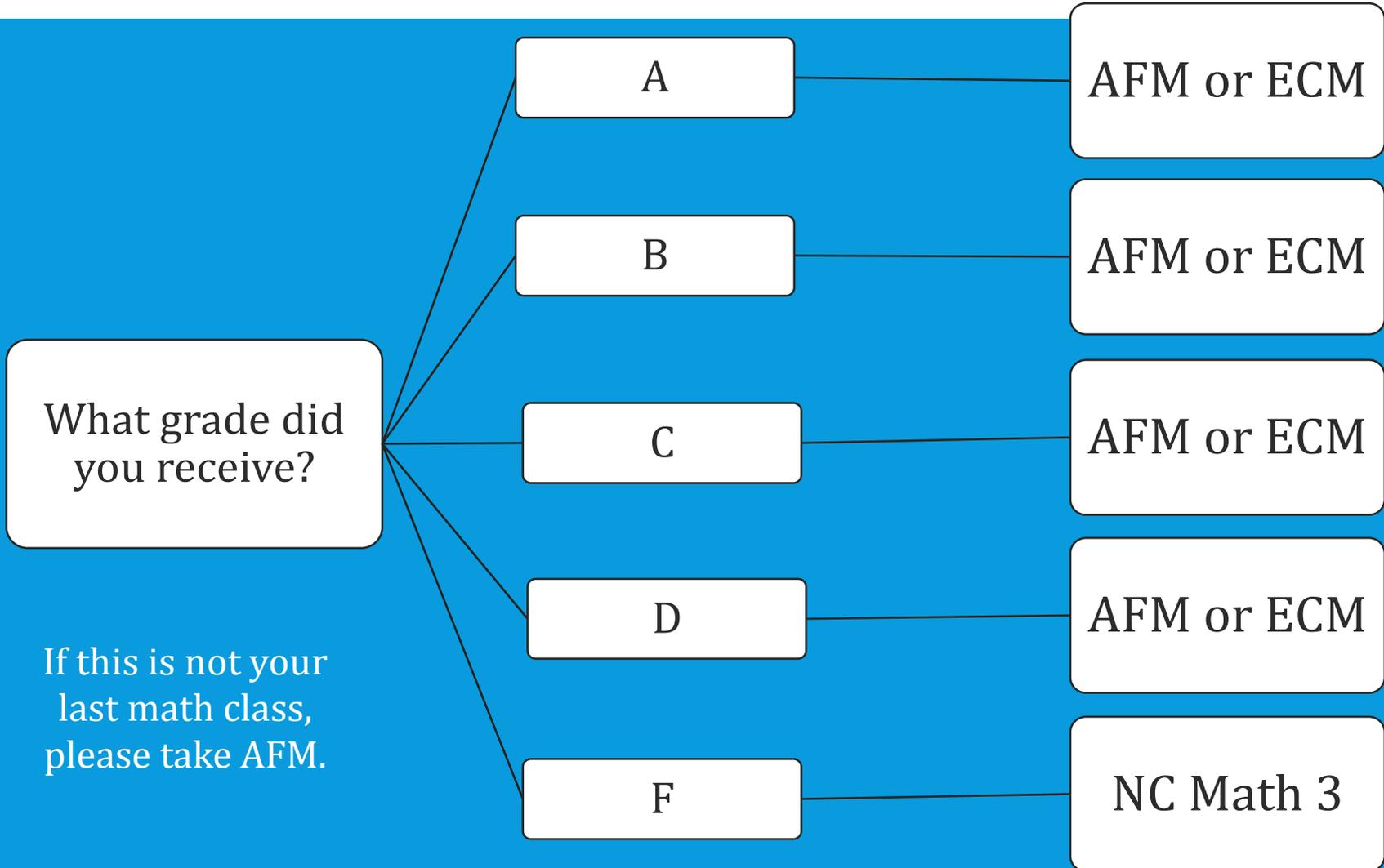
NC MATH 2



NC MATH 2 (HONORS)

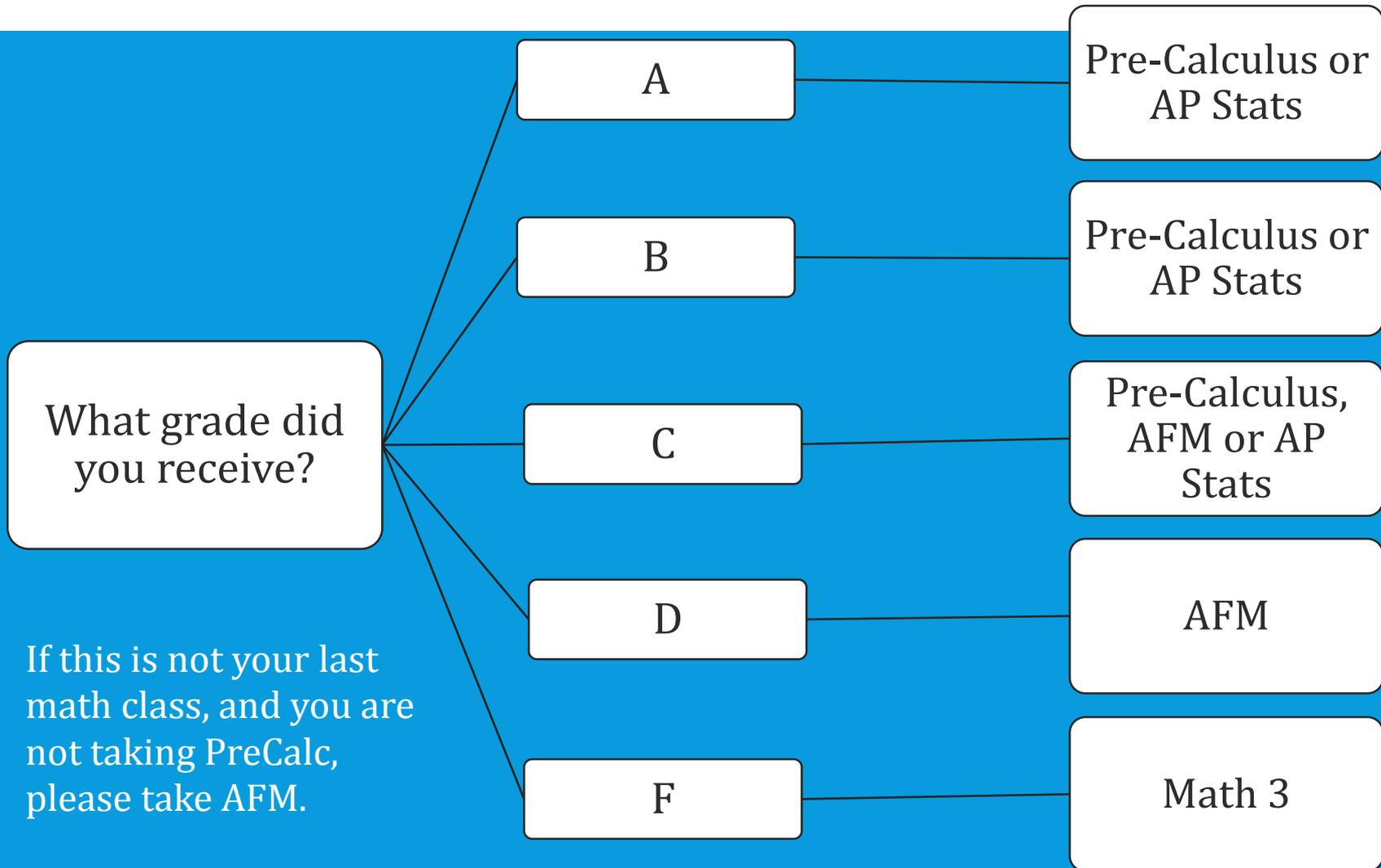


NC MATH 3

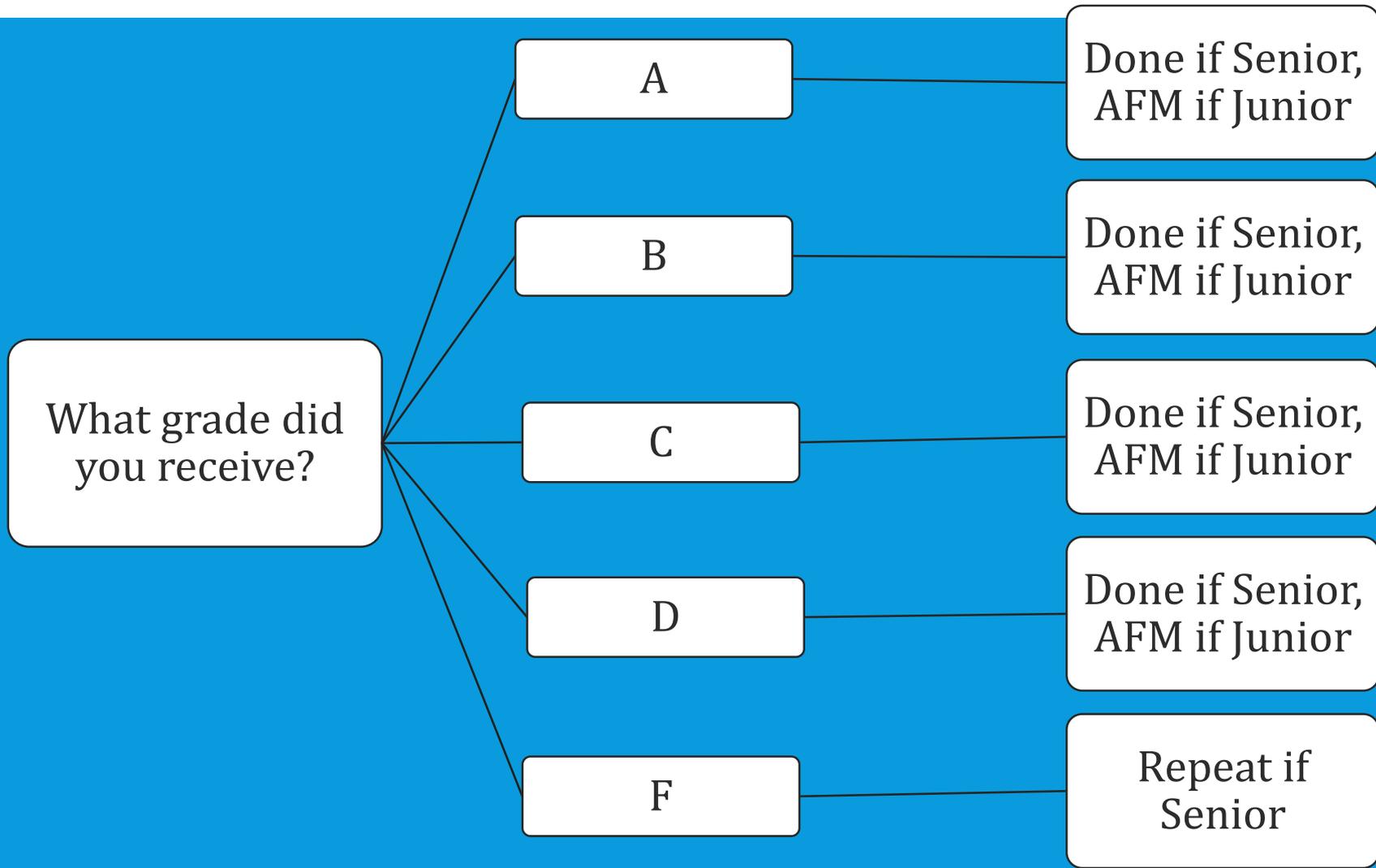


If this is not your last math class, please take AFM.

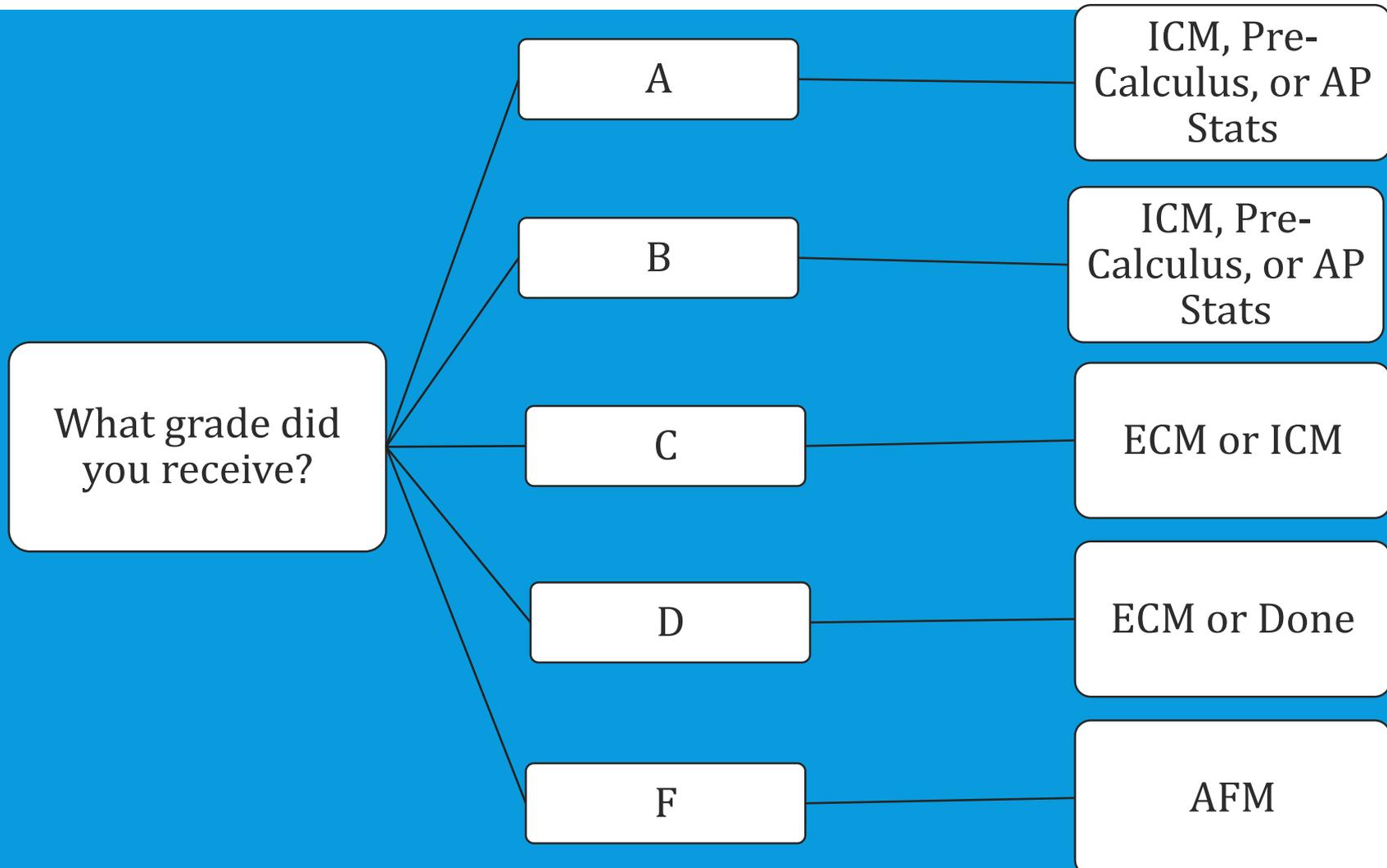
NC MATH 3 (HONORS)



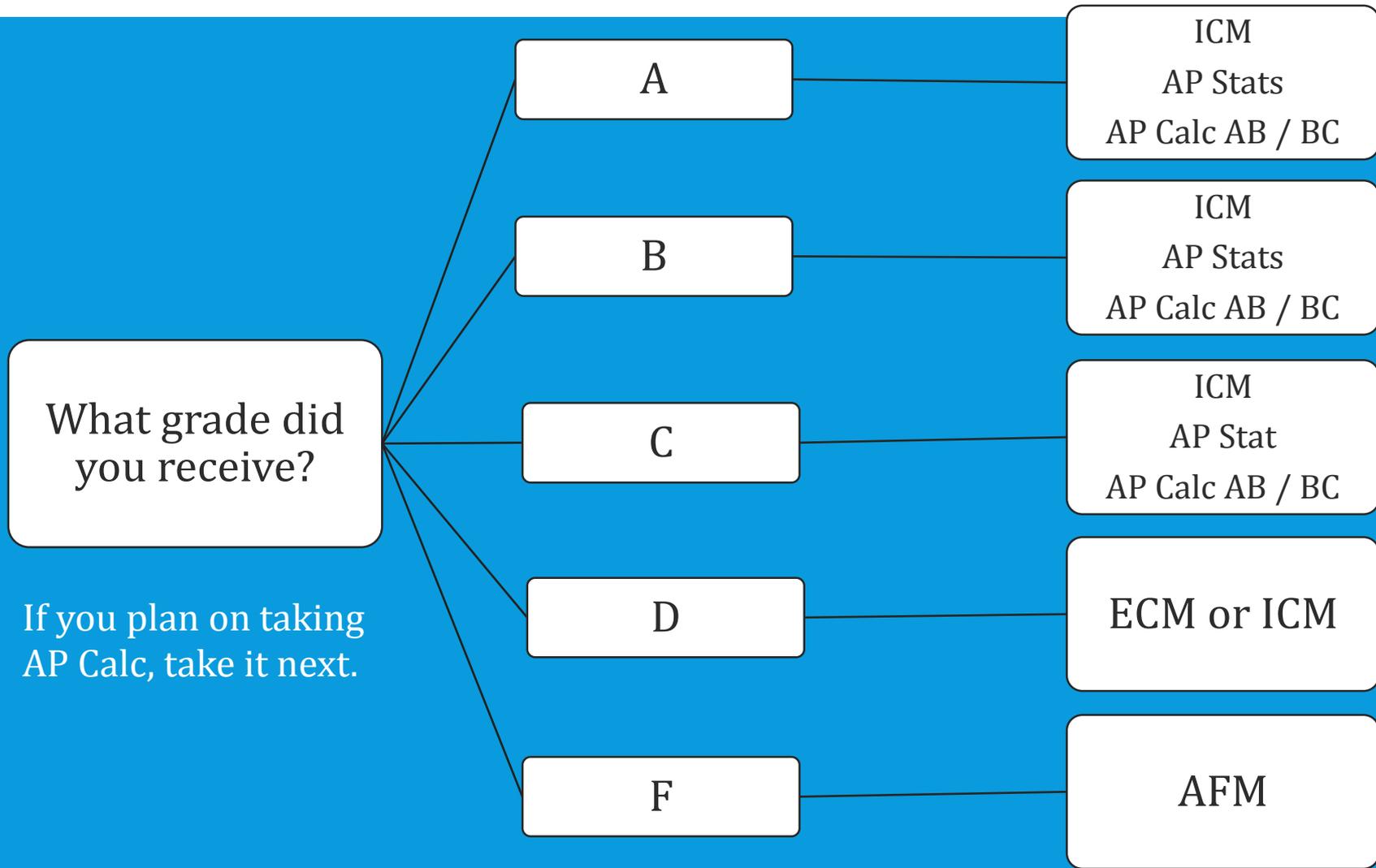
ECM



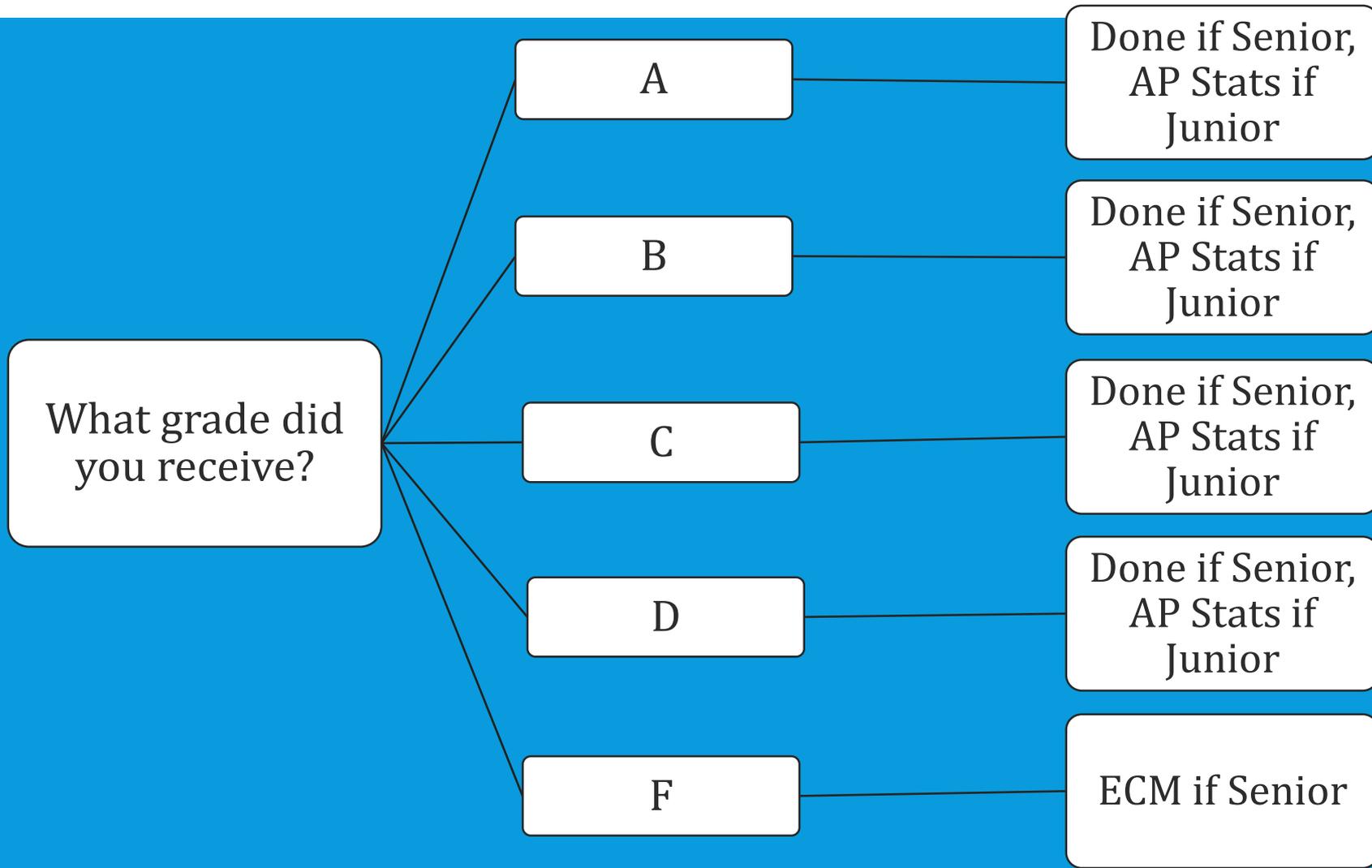
ADVANCED FUNCTIONS AND MODELING (AFM)



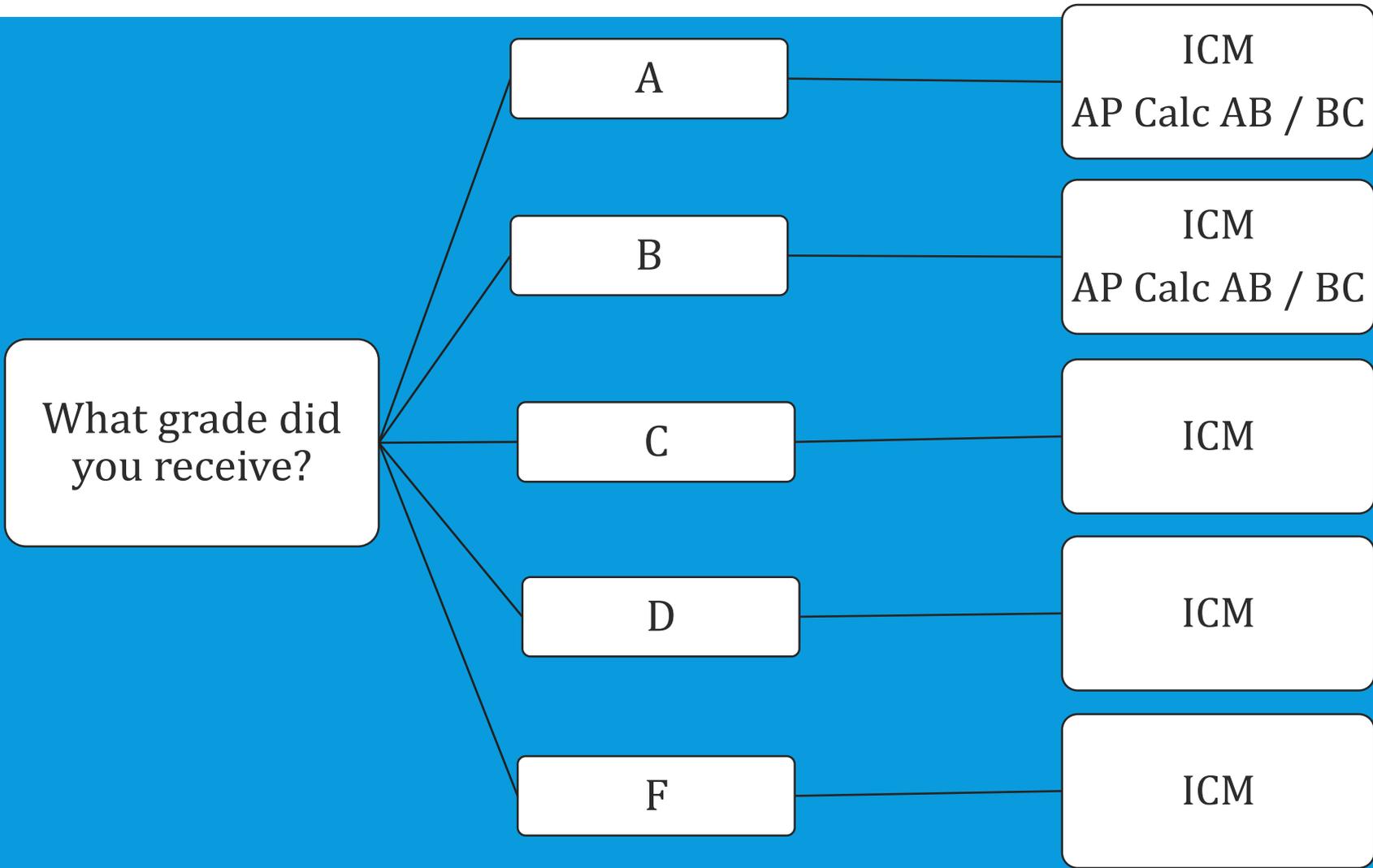
PRE-CALCULUS (HONORS)



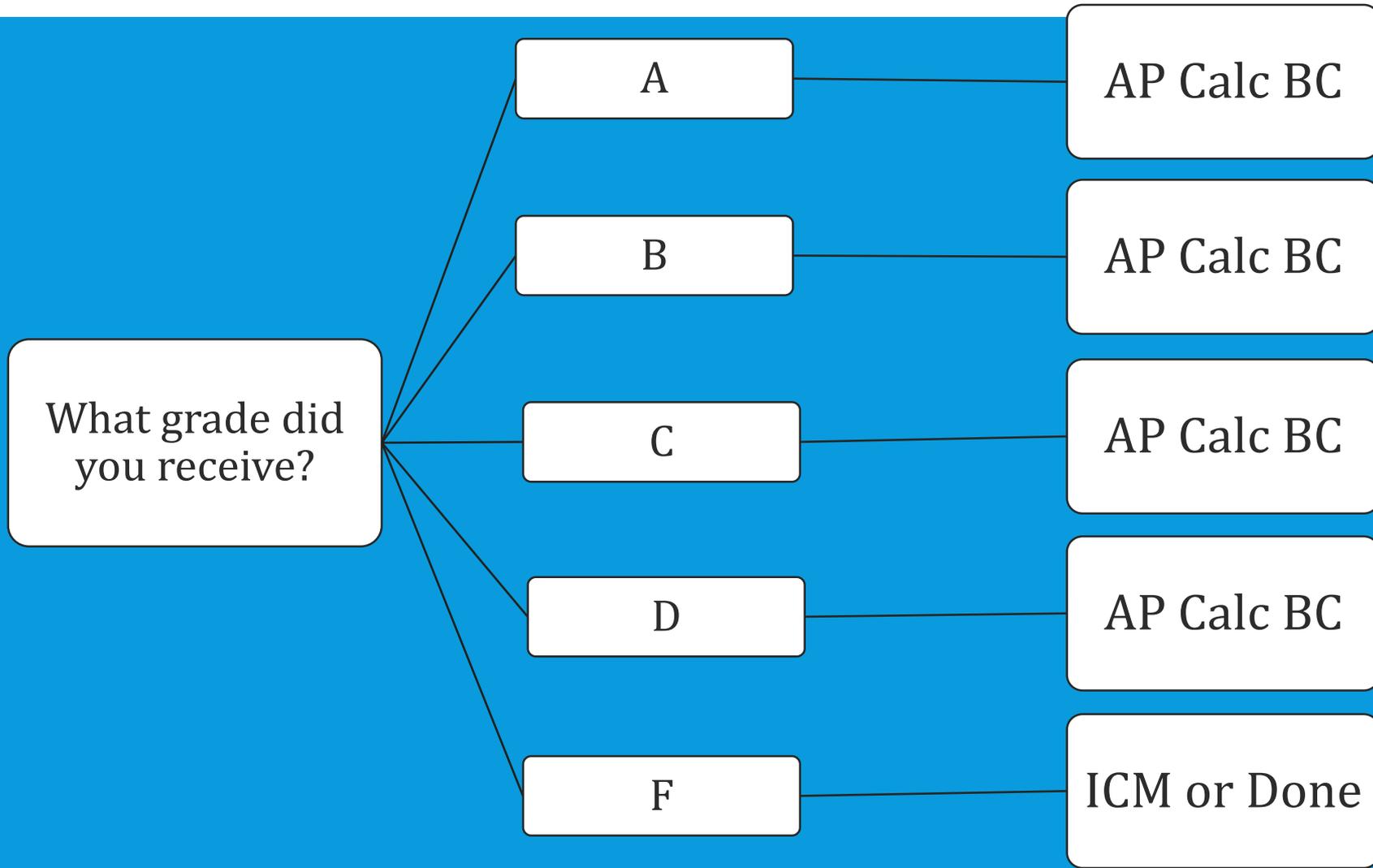
INTRODUCTION TO COLLEGE MATHEMATICS (ICM) (HONORS)



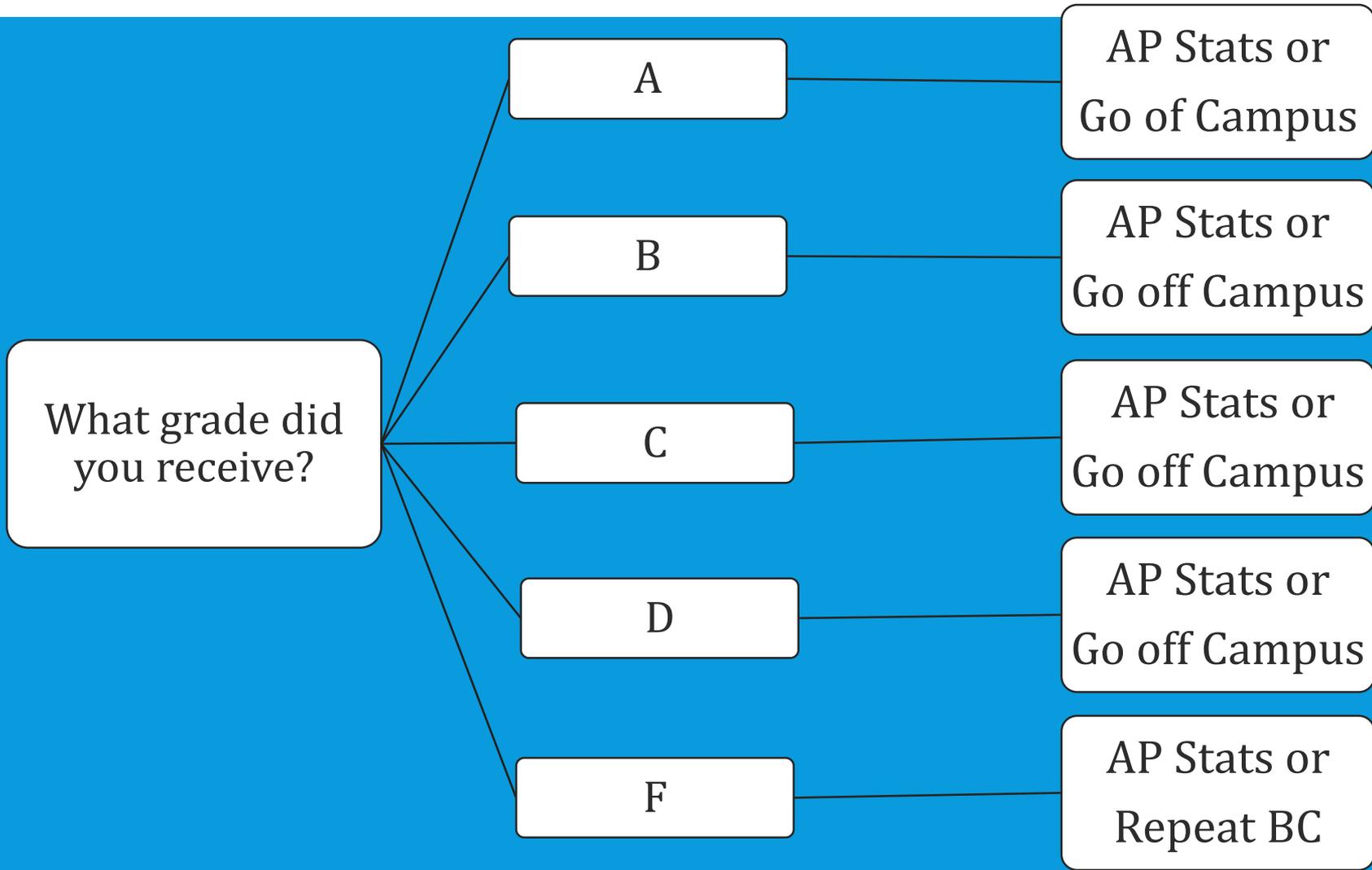
ADVANCED PLACEMENT STATISTICS



ADVANCED PLACEMENT CALCULUS AB



ADVANCED PLACEMENT CALCULUS BC



COURSE DESCRIPTIONS

Taken from the WCPSS High School Program
Planning Guide

*Consult the Program Planning Guide and your
Counselor to determine graduation requirements
and appropriate course of study

FUNDAMENTAL MATH (ELECTIVE CREDIT)

- Fundamental Math provides learners with an opportunity to review and study foundational topics for higher-level mathematics. Topics include: working with different forms of numbers (rates, ratios, fractions, percents); exponents and exponential notation; solving percent problems using proportions; integers; square roots; simplifying numerical and algebraic expressions; solving one-variable equations; linear relationships; and statistics. Students will solve relevant and authentic problems using manipulative and appropriate technology.

INTRODUCTORY MATH (ELECTIVE CREDIT)

- Introductory Math provides learners with an opportunity to review and study foundational topics for higher-level mathematics. Topics include: simplifying expressions and solving one-variable equations and inequalities; one-variable statistics; different representation of functions; linear functions; the Pythagorean theorem; volume; solving systems of linear equations; graphing line of best fit; and operations with polynomials. Students will solve relevant and authentic problems using manipulates and appropriate technology.

FOUNDATIONS OF MATH 1 (1A) (ELECTIVE CREDIT)

- The purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. In conjunction with Math IB, this course deepens and extends understanding of linear relationships, in part by contrasting them with exponential and quadratic phenomena, and in part by applying linear models to data that exhibit a linear trend. In addition to studying bivariate data, students also summarize, represent, and interpret data on a single count or measurement variable. The Geometry standards that appear in this course formalize and extend students' geometric experiences to explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

MATH 1B

- The purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. This course deepens and extends understanding of linear relationships, in part by contrasting them with exponential and quadratic phenomena, and in part by applying linear models to data that exhibit a linear trend. In addition to studying bivariate data, students also summarize, represent, and interpret data on a single count or measurement variable. The Geometry standards that appear in this course formalize and extend students' geometric experiences to explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course fulfills the North Carolina high school graduation requirement for Common Core Math I. The final exam is the North Carolina End-of-Course Test based on the Common Core Math 1 Standards.

MATH 1 (SEMESTER)

- The purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. This course deepens and extends understanding of linear relationships, in part by contrasting them with exponential and quadratic phenomena, and in part by applying linear models to data that exhibit a linear trend. In addition to studying bivariate data, students also summarize, represent, and interpret data on a single count or measurement variable. The Geometry standards that appear in this course formalize and extend students' geometric experiences to explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course fulfills the North Carolina high school graduation requirement for Common Core Math I. The final exam is the North Carolina End-of-Course Test based on the Common Core Math 1 Standards.

MATH PLUS (HONORS) (ELECTIVE CREDIT)

- Math Plus deepens the understanding of mathematical concepts covered in Math I to ensure that students are successful in future math courses that involve the Common Core State Standards for Mathematics. Students will be exposed to the content of Math I to reinforce crucial skills needed for Honors level courses. Students will also preview content for Honors Math II.

FOUNDATIONS OF MATH 2 (FOM 2) (ELECTIVE CREDIT)

- Foundations of Math II provides learners with an opportunity to review and study foundational topics for higher-level mathematics. The topics covered will be based on student needs and will be aligned with Math II. Students will solve relevant and authentic problems using manipulatives and appropriate technology.

MATH 2

- In Math II, students continue to deepen their study of quadratic expressions, equations, and functions; comparing their characteristics and behavior to those of linear and exponential relationships from Math I. The concept of quadratics is generalized with the introduction of higher degree polynomials. New methods for solving quadratic and exponential equations are developed. The characteristics of advanced types of functions are investigated (including power, inverse variation, radical, absolute value, piecewise-defined, and simple trigonometric functions). The link between probability and data is explored through conditional probability and counting methods. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between Math II and the historical approach taken in Geometry classes. For example, transformations are explored early in the course and provide the framework for studying geometric concepts such as similarity and congruence. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course fulfills the North Carolina high school graduation requirement for Math II. The final exam is the North Carolina Final Exam for Math II.

MATH 2 (HONORS)

- In Math II, students continue to deepen their study of quadratic expressions, equations, and functions; comparing their characteristics and behavior to those of linear and exponential relationships from Math I. The concept of quadratics is generalized with the introduction of more sophisticated polynomials. New methods for solving quadratic and exponential equations are developed. The characteristics of more advanced types of functions are investigated (including power, inverse variation, radical, absolute value, piecewise-defined, and simple trigonometric functions). The link between probability and data is explored through conditional probability and counting methods. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between Math II and the historical approach taken in Geometry classes. For example, transformations are explored early in the course and provide the framework for studying geometric concepts such as similarity and congruence. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. Honors Math II explores content at a rigorous level to begin students' preparation for advanced math courses. The Standards for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course fulfills the North Carolina high school graduation requirement for Math II. The final exam is the North Carolina Final Exam for Math II.

MATH 3

- This course is designed so that students have the opportunity to pull together and apply the accumulation of mathematics concepts learned previously. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions, including an intense study of families of functions and the relationships therein. They expand their study of right triangle trigonometry to include general triangles and in the study of trigonometric functions to model simple periodic phenomena. Finally, students bring together all of their experience with functions and geometry to create models and solve contextual problems. Appropriate technology and tools, including manipulatives and calculators, will be used regularly for instruction and assessment. The Standard for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that means use of their ability to make sense of problems situations. This course fulfills the North Carolina high school graduation requirement for Math III. The final exam is the North Carolina Final Exam for Math III.

MATH 3 (HONORS)

- This course is designed so that students have the opportunity to pull together and apply the accumulation of mathematics concepts learned previously. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions, including an intense study of families of functions and the relationships therein. They expand their study of right triangle trigonometry to include general triangles and in the study of trigonometric functions to model simple periodic phenomena. Finally, students bring together all of their experience with functions and geometry to create models and solve contextual problems. Appropriate technology and tools, including manipulatives and calculators, will be used regularly for instruction and assessment. The Standard for Mathematical Practice apply throughout each course and, together with the content standards, require that students experience mathematics as a coherent, useful, and logical subject that means use of their ability to make sense of problems situations. This course fulfills the North Carolina high school graduation requirement for Math III. The final exam is the North Carolina Final Exam for Math III.

ESSENTIALS FOR COLLEGE MATH (ECM)

- Concepts explored in this course include exponentials, quadratics, equations, measurement, number operations, systems, linear functions, and statistics. Emphasis is on understanding mathematics concepts rather than just memorizing procedures. Students will learn the context behind procedures: for example, why they should use a certain formula or method to solve a problem. This equips them with higher-order thinking skills enabling them to apply math skills, functions, and concepts in different situations. Additionally, students are prepared for college level math assignments. This course is accepted as the fourth math for admission to UNC System institutions.

ADVANCED FUNCTIONS AND MODELING (AFM)

- Advanced Functions and Modeling provides students an in-depth study of modeling and applying functions, probability, statistics, trigonometry, financial literacy. Appropriate technology, from manipulatives to calculators and application software, are used regularly for instruction and assessment. Advanced Functions and Modeling is not an honors level course. This course is accepted as the fourth math for admission to UNC System institutions.

PRE CALCULUS (HONORS)

- The Precalculus curriculum includes a complete study of trigonometry, as well as advanced algebra topics, analytic geometry, sequences and series, data analysis, vectors, and limits. Applications and modeling are included throughout the course of study. Appropriate technology, from manipulatives to calculators and application software, is used for instruction and assessment. This course is accepted as the fourth math for admission to UNC System institutions.

ADVANCED PLACEMENT STATISTICS

- The AP Statistics curriculum is divided into four major themes: exploratory analysis, planning a study, probability, and statistical inference. This is a college-level course. Use of computers and graphing calculators play an important role in this course. For each session of classroom instruction, the student is expected to spend, as a minimum, an equal amount of time outside the classroom for review, written assignments, and preparation. It is expected that students enrolled in this course will take the College Board Advanced Placement Exam. This course is accepted as the fourth math for admission to UNC System institutions.

ADVANCED PLACEMENT CALCULUS AB

- The AP Calculus curriculum includes limits, continuity, derivatives with applications, and elementary integration with applications. This is a college-level course. Use of computers and graphing calculators play an important role in this course. For each session of classroom instruction the student is expected to spend, as a minimum, an equal amount of time outside the classroom for review, written assignments, and preparation. It is expected that students enrolled in this course will take the College Board Advanced Placement Exam. This course is accepted as the fourth math for admission to UNC System institutions.

ADVANCED PLACEMENT CALCULUS BC

- The BC level of AP Calculus revisits some topics introduced in the AB course. Topics include differentials, integrals, infinite series, and differential equations. In addition, the curriculum for this course includes convergence and divergence of sequences and series, parametric representation of curves, polar curves, and additional integration techniques. This is a college-level course. Use of computers and graphing calculators play an important role in this course. For each session of classroom instruction, the student is expected to spend, as a minimum, an equal amount of time outside the classroom for review, written assignments, and preparation. It is expected that students enrolled in this course will take the College Board Advanced Placement Exam. This course is accepted as the fourth math for admission to UNC System institutions.

INTRODUCTION TO COLLEGE MATH (ICM) (HONORS)

- The ICM curriculum includes data analysis; applications of functions, matrices, and a continuation of trigonometry; vectors, limits and their applications; and the mathematics of networks, social choice, and decision-making. Applications and modeling are included throughout the course of study. Appropriate technology, from manipulatives to calculators and application software, is used for instruction and assessment.