# **Fairfax Collegiate**

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# FCS.

# T.J. Exam Math 6-8 Syllabus

## **Course Goals**

#### 1 TJ Exam Math Concepts

Students improve their proficiency with the types of math problems represented on the TJ admissions exam, including algebra, advanced arithmetic and word problems, geometry, graphing, and visual problems.

#### 2 TJ Exam Math Techniques

Students learn problem-solving skills and strategies for the math portion of the TJ admissions exam, including important formulas and equations, solution techniques for common problem types, deciphering word problems, and familiarity with test structure and content.

## **Course Topics**

#### **1 Basic Concepts and Arithmetic**

Students review math concepts and arithmetic rules for the order of operations, fractions and percentages, negative numbers, multiplication rules, and related formulas.

#### 2 Algebra

Students develop skill with algebraic expressions, equations and systems of equations, substitution, isolating variables, and translating word problems into solvable systems of equations.

#### 3 Word Problems

Students develop familiarity with the types of word problems featured on the TJ admissions exam and with solution strategies for them.

#### 4 Geometry

Students develop skill with geometry problems involving angles and triangles, polygons, quadrilaterals, circles, and perimeter/circumference and area.

### 5 Graphing, Charts, and Visual Problems

Students develop skill with charting problems, different types of graphs, and visual data interpretation.

## **6 Problem Solving Strategies**

Students develop strategies and skills for solving math problems on the TJ admissions exam, such as estimation, pseudo-operations, answer elimination, assessing answer reasonableness, and test-taking time management.

#### **7 Test Structure and Format**

Students become familiarized with the structure, format, and time constraints of the TJ admission exam's math portion.

#### **8 TJ Exam Scoring and Admissions**

Students become familiar with the TJ admissions process, and they understand the rubric and criteria for exam scoring,

particularly the high importance of the math section and its use in multiple stages of the admissions process.

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