# Grade 6 Entrance Exam: Accelerated Math

The Grade 6 Accelerated Math Entrance Exam is a two-part exam designed to evaluate students' general math skills, comprehensive skills, and deductive reasoning and processing abilities. All questions and tasks are aligned with the new Grade 6 curriculum released by Alberta Education. **The exam will be calculator free.**

## Part 1: General Math Skills (<10 min.)

- Students will be given 16 multiple choice questions that are designed to be basic math knowledge.
- Multiple Choice Questions
- Key skills assessed include:
  - Add/Subtract Integers
  - Add/Subtract Decimals & Fractions
  - Basic Percentages
  - Order of Operations

## Part 2: Comprehensive Math Skills (≈20-45 min.)

- Students will be given 12 numeric-response questions (which mean non-multiple choice.)
- You will need to fill out the sheet based on your answer. (See attachment for sample bubble sheet to show familiarity with it.)
- Some skills are reassessed from Part 1, but will be more comprehensive
- Key skills assessed include:
  - Decimal Operations
  - Fraction Operations
  - GCF: Greatest Common Factors and Divisibility Rules
  - Add/Subtract Integers and missing values
  - Percentage Questions
  - Prime Factorization
  - Representing factors as a product of powers

# Part 2 Blueprint:

| Question | Guiding Question | Topic | Item Description |
|---|---|---|---|
| 1 | How can the process of multiplication and division be applied to decimal numbers? | Multiply Decimals | Determine the product of a decimal number and whole number. |
| 2 | How can the process of multiplication and division be applied to decimal numbers? | Dividing Decimals | Determine the quotient of a decimal number and whole number. |
| 3 | How can prime factorization and exponentiation provide new perspectives of numbers? | Common Factors | Determine the greatest common factor for two natural numbers. |
| 4 | How can the infinite nature of the number line broaden the perception of number? | Additive Inverses | Use the concept of additive inverses to find a missing integers. |
| 5 | How can the addition and subtraction of fractions be generalized? | Adding Fractions | Add two proper fractions with unlike denominators. |
| 6 | How can the addition and subtraction of fractions be generalized? | Subtracting Fractions | Subtract two proper fractions with unlike denominators. |
| 7 | How can an understanding of multiplication be extended to fractions? | Multiply Fractions | Determine the product of a whole number and a fraction. |
| 8 | How can an understanding of multiplication be extended to fractions? | Multiply Fractions | Determine the product of a fraction and a whole number. |
| 9 | In what ways can equivalent ratios support proportional reasoning? | Percentage | Determine the percentage of a number. |
| 10 | In what ways can equivalent ratios support proportional reasoning? | Percentage | Determine the whole given a percentage and the part. |
| 11 | How can prime factorization and exponentiation provide new perspectives of numbers? | Prime Factors | Express a number as a product of prime factors. |
| 12 | How can prime factorization and exponentiation provide new perspectives of numbers? | Rules of Divisibility | Determine whether a number is divisible by another number. |

# Tips for Success

1. **Review Key Concepts**:
   a. Focus on fundamental topics as mentioned.
   b. Review key words in the event some words are word problems. (Ex. What does sum, difference, product, and quotient mean?)
2. **Practice Problem Solving**:
   a. Work through sample questions or past exams. Using old PAT 6 released items contains some of the topics you will see on the exam.
   b. Try to solve problems in different ways to understand concepts deeply, not just memorizing steps.
3. **Work on Time Management**:
   a. Remember you have 90 minutes as a maximum amount of time.
4. **Use Study Resources**:
   a. There are plenty of websites, apps, and books dedicated to junior high math. Khan Academy, for instance, has free lessons on most math topics.
5. **Ask for Help When Needed**:
   a. If there's a topic you're having trouble with, don't hesitate to ask a teacher, parent, or a friend. Sometimes a little guidance can make a big difference.
6. **Stay Calm and Confident**:
   a. Stay positive during your preparation and on the exam day.
   b. You got this!!