

Maths standards for sixth grade

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B1. Numbers

B2. Powers and roots (square of a number, cube of a number, powers of ten)

B3. Data statistics and probability

B4. Algebra

B5. Geometry

B6. Measurement

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A. Skills

A1. Problem solving :

A1.1. interpret information-identify the problem-generate strategies (procedure)

A1.2. connect mathematical content to literature

A1.3. everyday situations

A1.4. understand the basic language 'and', 'or', 'not' (choice making)

A1.5. model problems with pictures , diagrams etc. (representation of action, of strategy)

A1.6. represent problems numerically, verbally, algebraically.

A1.7. make charts to solve numerical problems

A1.8. give counterexamples

A1.9. trial and error method and the process of elimination to solve problems

A2. Reasoning and proof

A2.1. understand that : there are many strategies to solve the same problem

A2.2. explain a rationale for strategy

A2.3. make conjectures

A2.4. verify claims

A2.5. recognize patterns

B. Content

B1. Numbers

B1.1. place value of whole numbers

B1.2. understand properties

B1.3. order of operations

B1.4. factors and multiples

B1.5. integer operations (positive negative integers/ adding subtracting/ multiplying dividing)

B1.6. fractions decimals and percents

B1.7. fractions and equivalent fractions (methods for finding equivalent fractions)

B1.8. comparing and ordering fractions (fractions, mixed numbers)

B1.9. addition and subtraction of fractions

B1.10. multiplication and division of fractions

B1.11. naming and ordering decimals

B1.12 decimal operations

B1.13 meaning of percent

B1.14 using and finding percents

B1.15 fraction, decimal and percent relationships

B2. powers and roots (square of a number, cube of a number, powers of ten)

B3. Data statistics and probability

B3.1. collecting data (surveys, random samples, questionnaires)

B3.2. displaying data (table, box plot, create a circle graph, a line plot, a broken line graph, a leaf plot, a bar graph, a histogram)

B3.3. analyzing data :distribution of data

B3.4. statistics (mean, median, mode, range)

B3.5.combinations and permutations

B3.6.probability. experimental probability

B3.7logic

B3.8 if/then statements

B3.9 sets

B4. Algebra

B4.1. writing expressions and equations (involving addition, subtraction, multiplication, division, two operations

B4.2. simplifying & evaluating expressions and formulas

B4.3. ratio and proportion

B4.4. inequalities

B4.5. graphing on the coordinate plane

B5. Geometry

B5.1. naming and classifying Angles and triangles

B5.2. polygons and polyhedrons

B5.3. symmetry and transformations

B5.4. perimeter

B5.5. area

B5.6. surface area

B5.7. volume

B5.8. circles

B6. Measurement

B6.1 systems of measurement

B6.2. length and distance

B6.3. area, volume and capacity

B6.4. mass and weight

B6.5. time

B6.6. size and scale

B7. Tools

B7.1. Four function calculator

B7.2. scientific calculator

B7.3. geometry tools (ruler, protractor, compass, construction problem)