

1.0

NUMBER SENSE

Students understand the place value of whole numbers and decimals to two decimal places and how whole numbers and decimals relate to simple fractions. Students use the concepts of negative numbers.

0.25



Fourth Grade Math Content Standard

1.0

NUMBER SENSE

Students understand
the place value of whole numbers
and decimals to two decimal places
and how whole numbers and decimals
relate to simple fractions.
Students use the concepts of negative
numbers.

Fourth Grade Math Content Standard



NUMBER SENSE

Read and write whole numbers
in the millions.

1.2

NUMBER SENSE

Order and compare whole numbers and decimals to two decimal places.

Fourth Grade Math Content Standard

1.3

NUMBER SENSE

Round whole numbers through the millions to the nearest ten, hundred, thousand, ten thousand, or hundred thousand.

1.4

NUMBER SENSE

Decide when a rounded solution is called for and explain why such a solution may be appropriate.

1.5

NUMBER SENSE

Explain different interpretations of fractions, for example, parts of a whole, parts of a set, and division of whole numbers by whole numbers; explain equivalents of fractions

1.6

NUMBER SENSE

Write tenths and hundredths in decimal and fraction notations and know the fraction and decimal equivalents for halves and fourths (e.g., $1/2 = 0.5$ or $.50$; $7/4 = 1 \ 3/4 = 1.75$).

1.7

NUMBER SENSE

Write the fraction represented by a drawing of parts of a figure; represent a given fraction by using drawings; and relate a fraction to a simple decimal on a number line.

1.8

NUMBER SENSE

Use concepts of negative numbers
(e.g., on a number line,
in counting, in temperature, in "owing").

1.9

NUMBER SENSE

Identify on a number line the relative position of positive fractions, positive mixed numbers, and positive decimals to two decimal places.

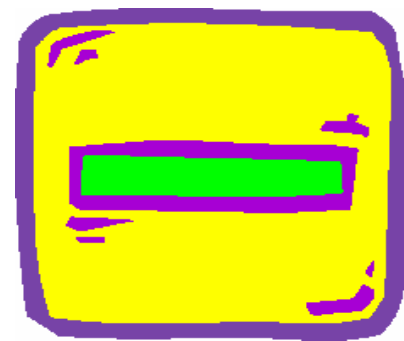
2.0

NUMBER SENSE

Students extend their use
and understanding of whole numbers
to the addition and subtraction
of simple decimals.



0.25



Fourth Grade Math Content Standard

2.0

NUMBER SENSE

Students extend their use
and understanding of whole numbers
to the addition and subtraction
of simple decimals.

2.1

NUMBER SENSE

Estimate and compute the sum or difference of whole numbers and positive decimals to two places.

2.2

NUMBER SENSE

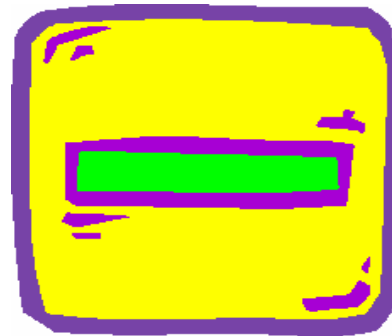
Round two-place decimals
to one decimal or the nearest whole number
and judge the reasonableness
of the rounded answer.

Fourth Grade Math Content Standard

3.0

NUMBER SENSE

Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among the operations.



Fourth Grade Content Standard

3.1

NUMBER SENSE

Demonstrate an understanding of,
and the ability to use, standard algorithms
for the addition and subtraction
of multidigit numbers.

3.2

NUMBER SENSE

Demonstrate an understanding of, and the ability to use, standard algorithms for multiplying a multidigit number by a two-digit number and for dividing a multidigit number by a one-digit number; use relationships between them to simplify computations and to check results.

3.3

NUMBER SENSE

Solve problems involving multiplication of multidigit numbers by two-digit numbers.

3.4

NUMBER SENSE

Solve problems involving division of multidigit numbers by one-digit numbers.

4.0

NUMBER SENSE

Students know how to factor
small whole numbers.

$$12 = 2 \cdot 2 \cdot 3$$

Fourth Grade Math Content Standard

4.0

NUMBER SENSE

Students know how to factor
small whole numbers.

Fourth Grade Math Content Standard

4.1

NUMBER SENSE

Understand that many whole numbers
break down in different ways
(e.g., $12 = 4 \times 3 = 2 \times 6 = 2 \times 2 \times 3$).

4.2

NUMBER SENSE

Know that numbers such as
2, 3, 5, 7, and 11
do not have any factors
except 1 and themselves
and that such numbers are called
prime numbers.

1.0

ALGEBRA AND FUNCTIONS

Students use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences.

$$3(x + y)$$

Fourth Grade Math Content Standard

1.0

ALGEBRA AND FUNCTIONS

Students use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences.



ALGEBRA AND FUNCTIONS

Use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate an understanding and the use of the concept of a variable).

1.2

ALGEBRA AND FUNCTIONS

Interpret and evaluate
mathematical expressions
that now use parentheses.

Fourth Grade Math Content Standard

1.3

ALGEBRA AND FUNCTIONS

Use parentheses to indicate which operation to perform first when writing expressions containing more than two terms and different operations.

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1.4

ALGEBRA AND FUNCTIONS

Use and interpret formulas
(e.g., area = length x width or $A = lw$)
to answer questions about
quantities and their relationships.

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1.5

ALGEBRA AND FUNCTIONS

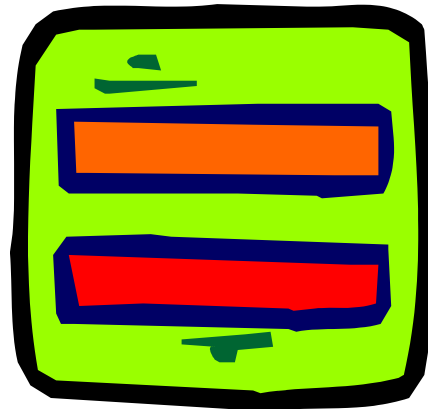
Understand that an equation
such as $y = 3x + 5$
is a prescription for determining a
second number when a first number is given.

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2.0

ALGEBRA AND FUNCTIONS

Students know how to manipulate equations.



Fourth Grade Math Content Standard

2.0

ALGEBRA AND FUNCTIONS

Students know how to manipulate equations.

Fourth Grade Math Content Standard

2.1

ALGEBRA AND FUNCTIONS

Know and understand that
equals added to equals are equal.

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2.2

ALGEBRA AND FUNCTIONS

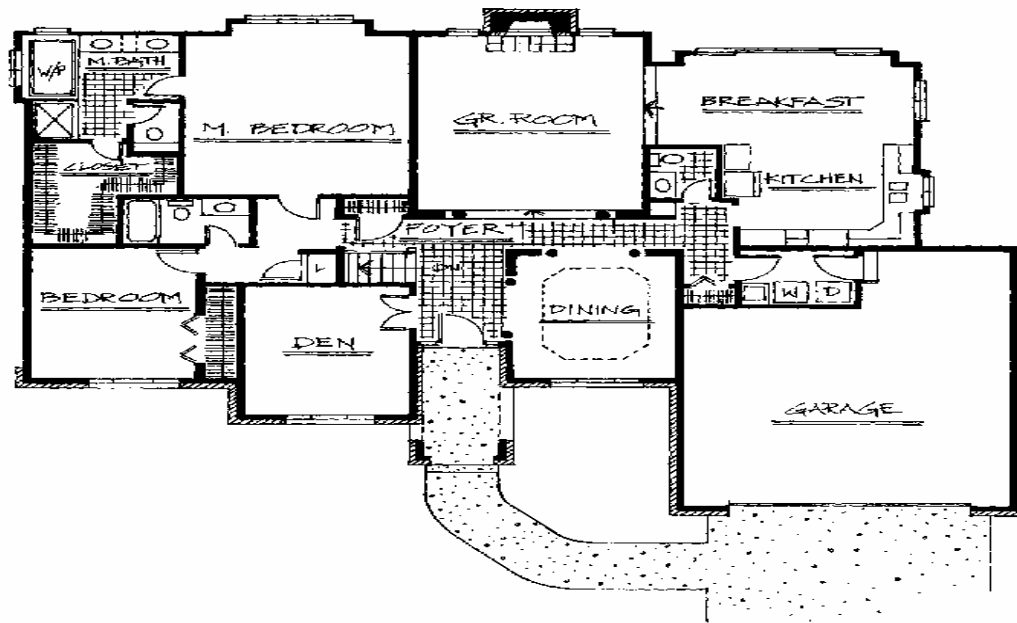
Know and understand that
equals multiplied by equals are equal.

Fourth Grade Math Content Standard

1.0

MEASUREMENT AND GEOMETRY

Students understand perimeter and area.



Fourth Grade Math Content Standard

1.0

MEASUREMENT AND GEOMETRY

Students understand perimeter and area.



MEASUREMENT AND GEOMETRY

Measure the area of rectangular shapes by using appropriate units, such as square centimeter (cm^2), square meter (m^2), square kilometer (km^2), square inch (in^2), square yard (yd^2), or square mile (mi^2).

1.2

MEASUREMENT AND GEOMETRY

Recognize that rectangles
that have the same area
can have different perimeters.

1.3

MEASUREMENT AND GEOMETRY

Understand that rectangles
that have the same perimeter
can have different areas.

1.4

MEASUREMENT AND GEOMETRY

Understand and use formulas to solve problems involving perimeters and areas of rectangles and squares.

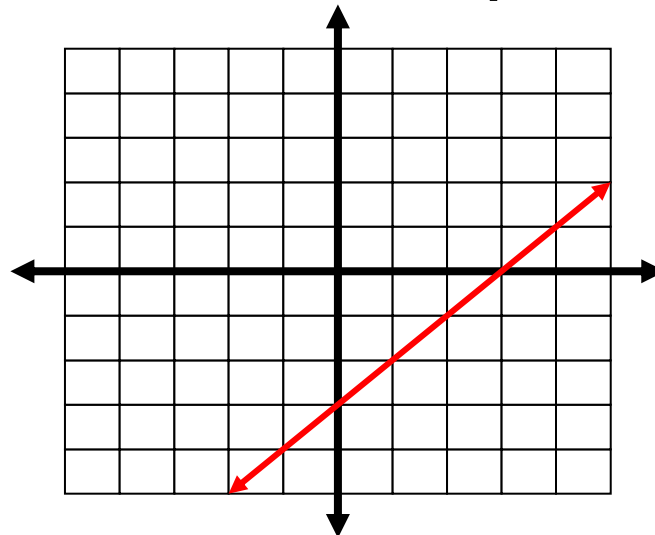
Use those formulas to find the areas of more complex figures by dividing the figures into basic shapes.

Fourth Grade Math Content Standard

2.0

MEASUREMENT AND GEOMETRY

Students use two-dimensional coordinate grids to represent points and graph lines and simple figures.



Fourth Grade Math Content Standard

2.0

MEASUREMENT AND GEOMETRY

Students use
two-dimensional coordinate grids
to represent points
and graph lines and simple figures.

Fourth Grade Math Content Standard

2.1

MEASUREMENT AND GEOMETRY

Draw the points corresponding to linear relationships on graph paper (e.g., draw 10 points on the graph of the equation $y = 3x$ and connect them by using a straight line).

2.2

MEASUREMENT AND GEOMETRY

Understand that the length of a horizontal line segment equals the difference of the x-coordinates.

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2.3

MEASUREMENT AND GEOMETRY

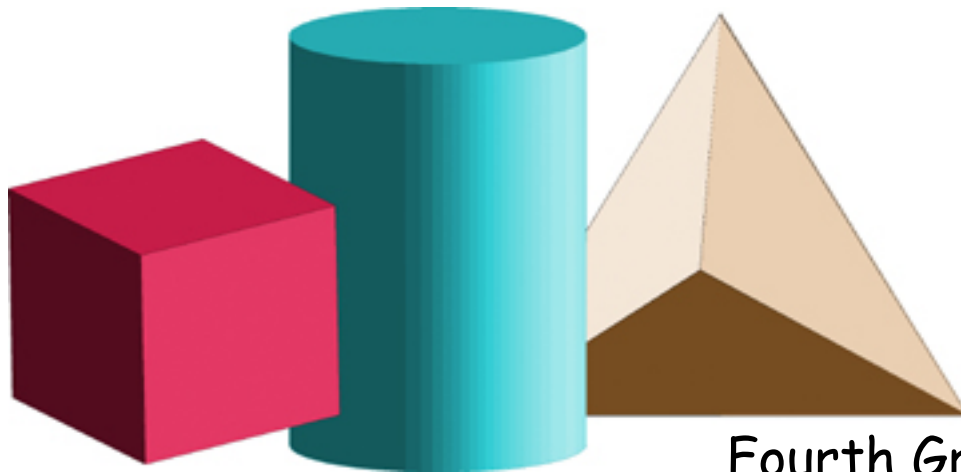
Understand that the length
of a vertical line segment equals
the difference of the y -coordinates.

Fourth Grade Math Content Standard

3.0

MEASUREMENT AND GEOMETRY

Students demonstrate an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.



Fourth Grade Math Content Standard

3.0

MEASUREMENT AND GEOMETRY

Students demonstrate an understanding of plane and solid geometric objects and use this knowledge to show relationships and solve problems.

Fourth Grade Math Content Standard

3.1

MEASUREMENT AND GEOMETRY

Identify lines
that are parallel and perpendicular.

3.2

MEASUREMENT AND GEOMETRY

Identify the radius and diameter of a circle.

3.3

MEASUREMENT AND GEOMETRY

Identify congruent figures.

3.4

MEASUREMENT AND GEOMETRY

Identify figures that have
bilateral and rotational symmetry.

3.5

MEASUREMENT AND GEOMETRY

Know the definitions of a right angle, an acute angle, and an obtuse angle. Understand that 90° , 180° , 270° , and 360° are associated, respectively, with $1/4$, $1/2$, $3/4$, and full turns.

3.6

MEASUREMENT AND GEOMETRY

Visualize, describe, and make models of geometric solids (e.g., prisms, pyramids) in terms of the number and shape of faces, edges, and vertices; interpret two-dimensional representations of three-dimensional objects; and draw patterns (of faces) for a solid that, when cut and folded, will make a model of the solid.

Fourth Grade Math Content Standard

3.7

MEASUREMENT AND GEOMETRY

Know the definitions of different triangles (e.g., equilateral, isosceles, scalene) and identify their attributes.

3.8

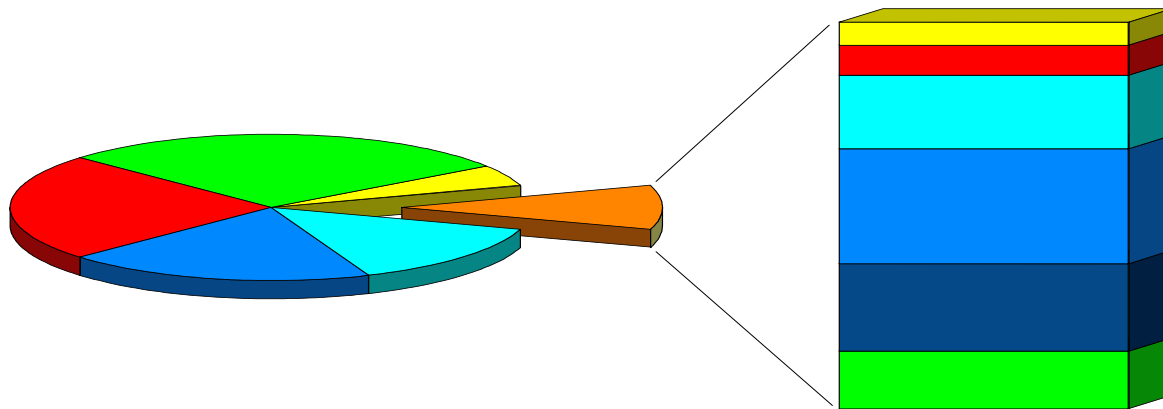
MEASUREMENT AND GEOMETRY

Know the definition of different quadrilaterals (e.g., rhombus, square, rectangle, parallelogram, trapezoid).

1.0

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Students organize, represent, and interpret numerical and categorical data and clearly communicate their findings.



Fourth Grade Math Content Standard

1.0

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Students organize, represent,
and interpret numerical
and categorical data
and clearly communicate
their findings.

Fourth Grade Math Content Standard



STATISTICS, DATA ANALYSIS, AND PROBABILITY

Formulate survey questions;
systematically collect and represent data
on a number line; and coordinate graphs,
tables, and charts.

1.2

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Identify the mode(s)
for sets of categorical data
and the mode(s), median,
and any apparent outliers
for numerical data sets.

Fourth Grade Math Content Standard

1.3

STATISTICS, DATA ANALYSIS, AND PROBABILITY

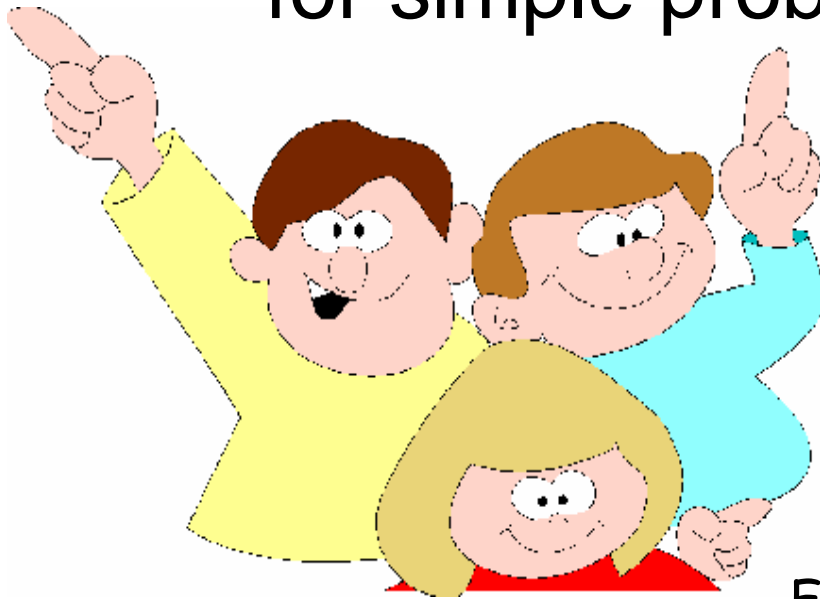
Interpret one- and two-variable data graphs to answer questions about a situation.

Fourth Grade Math Content Standard

2.0

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Students make predictions
for simple probability situations.



Fourth Grade Math Content Standard

2.0

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Students make predictions
for simple probability situations.

2.1

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Represent all possible outcomes
for a simple probability situation
in an organized way
(e.g., tables, grids, tree diagrams).

Fourth Grade Math Content Standard

2.2

STATISTICS, DATA ANALYSIS, AND PROBABILITY

Express outcomes of
experimental probability situations
verbally and numerically
(e.g., 3 out of 4; $3/4$).

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1.0

MATHEMATICAL REASONING

Students make decisions
about how to approach problems.



Fourth Grade Math Content Standard

1.0

MATHEMATICAL REASONING

Students make decisions
about how to approach problems.

Fourth Grade Math Content Standard



MATHEMATICAL REASONING

Analyze problems by
identifying relationships,
distinguishing relevant from irrelevant
information,
sequencing and prioritizing information,
and observing patterns.

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1.2

MATHEMATICAL REASONING

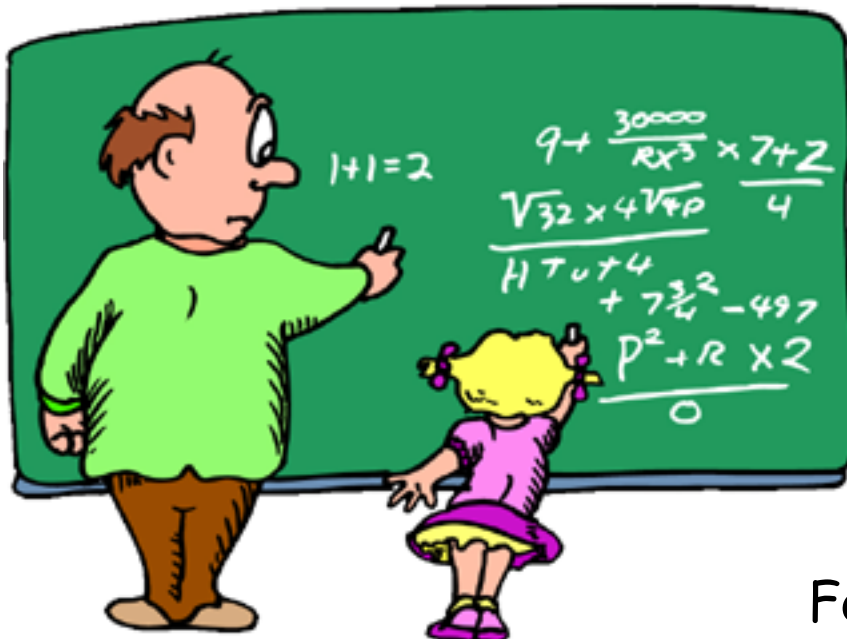
Determine when and how to
break a problem into simpler parts.

Fourth Grade Math Content Standard

2.0

MATHEMATICAL REASONING

Students use strategies, skills, and concepts in finding solutions.



Fourth Grade Math Content Standard

2.0

MATHEMATICAL REASONING

Students use strategies, skills,
and concepts in finding solutions.

Fourth Grade Math Content Standard

2.1

MATHEMATICAL REASONING

Use estimation to verify
the reasonableness of calculated results.

2.2

MATHEMATICAL REASONING

Apply strategies and results
from simpler problems
to more complex problems.

Fourth Grade Math Content Standard

2.3

MATHEMATICAL REASONING

Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.

2.4

MATHEMATICAL REASONING

Express the solution clearly and logically by using the appropriate mathematical notation and terms and clear language; support solutions with evidence in both verbal and symbolic work.

2.5

MATHEMATICAL REASONING

Indicate the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.

Fourth Grade Math Content Standard

2.6

MATHEMATICAL REASONING

Make precise calculations
and check the validity of the results
from the context of the problem.

Fourth Grade Math Content Standard

3.0

MATHEMATICAL REASONING

Students move beyond a particular problem by generalizing to other situations.



Fourth Grade Math Content Standard

3.0

MATHEMATICAL REASONING

Students move beyond a particular problem by generalizing to other situations.

Fourth Grade Math Content Standard

3.1

MATHEMATICAL REASONING

Evaluate the reasonableness of the solution
in the context of the original situation.

3.2

MATHEMATICAL REASONING

Note the method of deriving the solution and demonstrate a conceptual understanding of the derivation by solving similar problems.

3.3

MATHEMATICAL REASONING

Develop generalizations
of the results obtained
and apply them
in other circumstances.