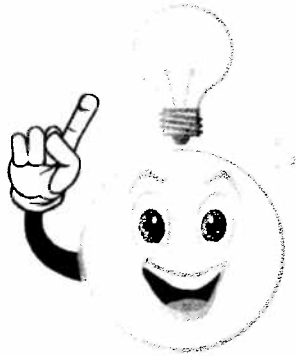
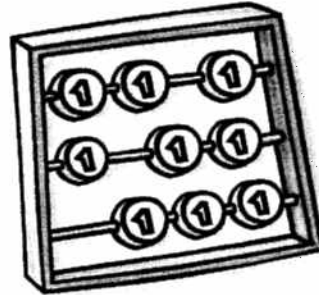
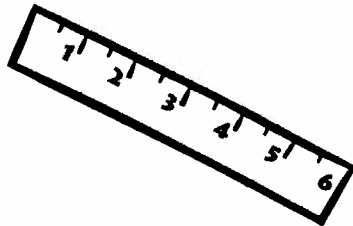


Welcome 2nd and 3rd Grade Families To Trumbull Math Night!

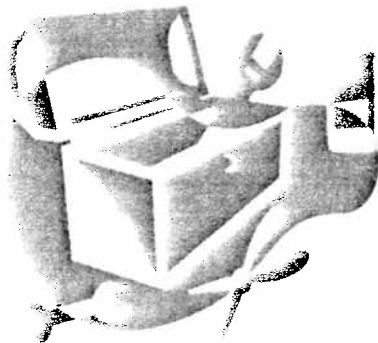
Please take a few moments to solve the following addition and subtraction problems.



You may use any of the math tools found on the table.



We will use these problems to demonstrate strategies and tools used by second and third grade students in their math instruction.



**Sample**

Solving Addition Problems

Solve each problem and show your solution.
For Problem 3, write an equation to go with the story problem.

NOTE Students practice solving addition problems with 2- and 3-digit numbers.

SMH 20-24

1. $215 + 78 = \underline{\hspace{2cm}}$

2. $157 + 121 = \underline{\hspace{2cm}}$

3. The students in Ms. Suarez's class had 320 bottle caps in their collection at the end of last week. This week, the students collected 64 more bottle caps. How many bottle caps do they have now?

Sample

More Story Problems (page 1 of 2)

Solve each problem. Show your work.

Write an equation.



1. Franco had 30 pennies.
He spent 19 pennies to buy a pencil.
How much money does Franco have left?

2. There were 32 students in the gym.
15 students went back to their classrooms.
How many students were left in the gym?



CONNECTICUT ACADEMY FOR EDUCATION IN MATHEMATICS, SCIENCE & TECHNOLOGY

10 Expectations Parents Should Have About Their Children's K-8 Mathematics Program

Communication has created a world economy in which working smarter is more important than merely working harder.

Jobs that contribute to this world economy require workers who are mentally fit — workers who are prepared to absorb new ideas, to adapt to change, to cope with ambiguity, to perceive patterns, and to solve unconventional problems.

It is these needs, not just the need for calculation (which is now done mostly by machines), that make mathematics a prerequisite to so many jobs. More than ever before, Americans need to think for a living, more than ever before, they need to think mathematically.

— Everybody Counts

1. Parents should expect that the way mathematics is being taught to their children will be very different from the way they were taught 20 or 30 years ago.
2. Parents should expect that their children will be using calculators regularly.
3. Parents should expect to see their children doing fewer repetitive and tedious drills, such as multiplication tables and long division.
4. Parents should expect that their children's mathematics classes and homework will include solving interesting and relevant mathematics problems, gathering and analyzing data, justifying solutions and writing conclusions.
5. Parents should expect that the mathematics their children are learning will be beneficial and applicable to life outside of school.
6. Parents should expect that their children will be prepared and encouraged to take algebra and geometry during their high school years.
7. Parents should expect that their children's mathematic achievement will be assessed and reported on the basis of their problem solving abilities, projects and portfolios of work (done individually or as part of a group), not on the basis of Mastery Tests and standardized tests alone.
8. Parents should expect that mathematics will be enjoyable for their children and that mathematics classes, activities and assignments include hands-on experiences that are likely to excite and encourage their youngster.
9. Parents should expect that, if or when these expectations are not being met, they (and their questions) will be welcomed by school personnel; and, that parents will be valued for caring enough to ask questions.
10. Finally, parents should expect that learning takes work and discipline.



**CONNECTICUT ACADEMY
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**Gift Ideas to Promote Interest and
Understanding of Mathematics and Science**

Older Children (Ages 8 & up)



Kaleidoscopes
Clocks and Watches
Motorized Construction Sets
Chess
Model Kits
Bird Feeder
Herb Garden
Weather Station

Microlab Sets (Chemical Magic,
Magic Crystals, Weather
Forecaster, etc.)

Gyroscope

Bug House/Ant Farm
Camera

Rocks and Minerals
books/materials

Binoculars

Aquarium

Magnifying Glass

Othello Game

Science and Math oriented
magazines and books

Puzzles

Construction Sets

Art Supplies

Strategy Board Games

Origami books and materials

Mini-Greenhouse

Terrarium

Flower Press

Magnets

Crystal Radio Kit

Electricity Experiment Sets

Solorgraphics Kit

Telescope and Astronomy
books/materials

Finger Print Kit

Suitcase Science Kits
(Magnet Set, Solar Collector,
Periscope, etc.)

Stone Tumbler

Microscope

Maze Books

Flying Disks

Calculator

Computer and variety of software

Tri-Ominos

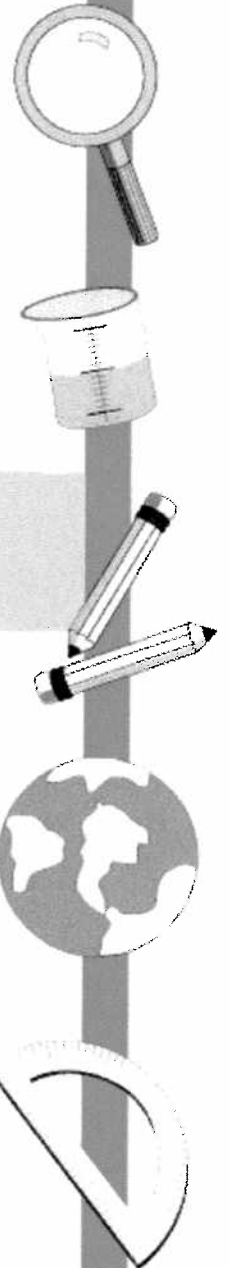
Mastermind

Science and Math Calendars

Hand Tools and Building Materials

Tornado Tubes

Toys in Space



Solving Addition and Subtraction Problems - Grade 2

Children work on problems in second grade that involve combining and separating.

During the year children are expected to perform the following 3 major tasks in a problem:

1. Understand the structure of the problem...

They do this first by **building a concrete model** (drawing, using manipulatives) of the problem, then, later **visualizing** (build a mental image) what is happening in the problem.

2. Develop Strategies.....(see Below)

First ...	Counting All
Next...	Counting On/Back
Then...	Breaking into Parts
Much Later...	Compensating-Changing the numbers for flexibility

3. Communicate their solutions orally and in writing, show the strategies they have used.

Compensation

First, they Visualize the problem.

Students change 1 or both of the numbers to a landmark/friendly number, then they compensate at the end of the problem for the changes they made.

Samples:

$25-11=???$

$21-11=10$

$10+4=14$

$25-11=14$

$35-17 = ???$

$37-17 = 20$

$20-2=18$

$35-17=18$

INVESTIGATIONS - Grade 3

ADDITION STRATEGIES

(from "Teacher Notes" in Unit 3 Collections and Travel Stories)

1) **Breaking Numbers Apart** - break the number into parts, add the parts and then find the total

sample 1: $349 + 175 =$
 $300 + 100 = 400$
 $40 + 70 = 110$
 $9 + 5 = 14$

 $400 + 110 + 14 = 524$

sample 2: 349
 $+175$

 400 (300+100)
 110 (40+70)
 14 (9+5)

 524

2) **Adding One Number in Parts** - keep one number the same and add the other in parts.

sample 1: $349 + 175 =$	sample 2: $349 + 175 =$
$349 + 100 = 449$	$349 + 50 = 399$
$449 + 50 = 499$	$399 + 50 = 449$
$499 + 25 = 524$	$449 + 50 = 499$
	$499 + 25 = 524$

3) **Changing the Numbers** - change one or both of the numbers to a "landmark" or "friendly" number (multiples of 10 or 100), then adjust the final answer.

sample 1: Changing to a landmark - $349 + 175 =$
 $350 + 175 = 525$
 $525 - 1 = 524$

sample 2: Creating an equivalent problem:
 $349 + 175 =$
 $324 + 200 = 524$ (25 was subtracted from 349 and added onto 175)

 $349 + 175 =$
 $400 + 124 = 524$ (51 was subtracted from 175 and added onto 349)

INVESTIGATIONS - Grade 3

SUBTRACTION STRATEGIES

(from "Teacher Notes" Unit 3 Collections and Travel Stories)

The strategies that are taught for subtraction fall into three basic categories: 1) subtracting in parts, 2) adding up or subtracting back, and 3) changing the numbers to numbers that are easier to subtract. The emphasis for the 1st two strategies is on ways to break numbers apart into smaller pieces that can easily be subtracted or added, and knowing how to combine those pieces to get an accurate solution. In order to use these strategies, students must understand the meaning of subtraction and have a good mental model of what is happening in the problem. They must be able to look at the problem as a whole, think about the relationships of the numbers in the problem, and choose an approach that they can carry out easily and accurately.

1) *Subtracting in Parts*

$$251 - 187 =$$

Sample 1: $251 - 187 =$
 $251 - 100 = 151$
 $151 - 80 = 71$
 $71 - 7 = 64$

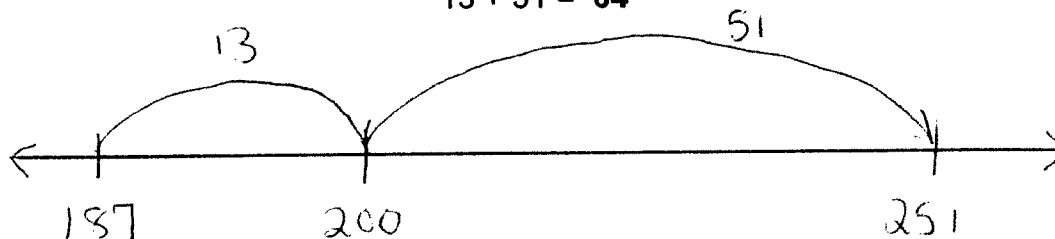
Sample 2: 251
 $\underline{-100}$
 151
 $\underline{- 50}$
 101
 $\underline{- 30}$
 71
 $\underline{- 7}$
 64

2) Adding Up or Subtracting Back - students visualize how much more or less one number is than the other and either "add up" or "subtract back" to find the answer

$$251 - 187 =$$

Sample 1: Adding Up

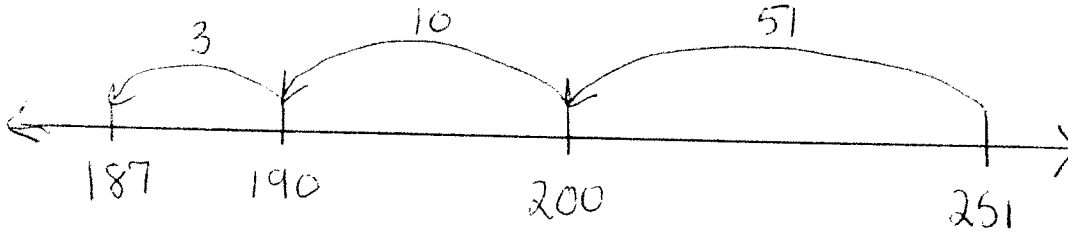
$$251 - 187 = 200$$
$$187 + 13 = 200$$
$$200 + 51 = 251$$
$$13 + 51 = 64$$



Sample 2: Subtracting Back $251 - 51 = 200$

$$200 - 13 = 187$$

$$51 + 13 = \mathbf{64}$$



3) Changing the Numbers and Compensating - in this strategy, students change one or both of the numbers to what they call "landmark" or "friendly" numbers, then they compensate at the end of the problem for the changes they made.

$$251 - 187 =$$

Sample 1: $251 - 187 =$

$$251 - 200 = 51$$

$$51 + 13 = \mathbf{64}$$

Sample 2: $250 - 200 = 50$

$$50 + 14 = \mathbf{64}$$

GRADE 2 & 3 INVESTIGATIONS

ON-LINE MATH RESOURCES

1. Go to www.pearsonsuccessnet.com
2. For Grade 2 Resources type:
Username: GRADE2 (all caps)
Password: GRADE2 (all caps)

For Grade 3 Resources type:
Username: GRADE3 (all caps)
Password: GRADE3 (all caps)
3. Click on STUDENT RESOURCES to access math manipulatives such as:
 - Place Value Blocks
 - Money
 - Graphs
 - Counters
 - Fractions
 - Clocks/Time
4. Click on INVESTIGATIONS OSE G2/G3 to access Student Math Handbook:
 - View examples and models used in class
 - See SMH page on homework as a reference
 - View all math games (rules and how to play)

**Please note: The username and password above have been set up for Frenchtown Elementary as a sample. If your child's teacher sends home a specific login, please use his/her login.*

Useful Math Websites for Students and Parents:

Kg:

Number Recognition: http://www.abcteach.com/directory/basics/math/number_concepts/

Math Tools and Manipulatives: http://www.eduplace.com/math/hmm/tools/tt_k.html

Number Flashcards: <http://www.flashcardmath.com/flashcards/flashcards.htm>

Grade 1:

Addition Practice: <http://www.abcteach.com/directory/basics/math/addition/>

Math Games: <http://www.primarygames.com/math.htm>

Math Tools and Manipulatives: http://www.eduplace.com/math/hmm/tools/tt_1.html

Addition Flashcards: <http://www.flashcardmath.com/flashcards/flashcards.htm>

Grade 2:

Subtraction Practice: <http://www.abcteach.com/directory/basics/math/subtraction/>

Fact Families (Addition/Subtraction): <http://www.mathcats.com/explore/factfamilycards.html>

Addition/Subtraction Practice: http://www.busyteacherscafe.com/units/add_sub_unit.htm

Math Games: <http://www.primarygames.com/math.htm>

Math Tools and Manipulatives: http://www.eduplace.com/math/hmm/tools/tt_2.html

Addition/Subtraction Flashcards: <http://www.flashcardmath.com/flashcards/flashcards.htm>

Grade 3:

Addition/Subtraction Practice: www.prongo.com/math

Addition Practice: <http://www.amblesideprimary.com/ambleweb/mentalmaths/additiontest.html>

Subtraction with Regrouping: <http://www.dositay.com/addsub/sub2digr.html>

Addition Practice: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=nbKS2>

Multiplication Practice: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=Toolkit%20index2a>

Skip Counting: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=Toolkit%20index2a>

Fraction Practice: <http://www.angliacampus.com/public/sec/maths/fract/index.htm>

Flashcards: <http://www.factmonster.com/math/flashcards.html>

Practice with all operations: <http://www.math.com/students/practice/arithmetricpractice.htm>

Grade 4:

Multiplication Practice: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=Toolkit%20index2a>

Division Practice: <http://www.amblesideprimary.com/ambleweb/mentalmaths/dividermachine.html>

Skip Counting: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=Toolkit%20index2a>

Fraction Practice: <http://www.angliacampus.com/public/sec/maths/fract/index.htm>

Various Math Practice Games: http://www.mathplayground.com/SolveIt_main.html

Flashcards: <http://www.factmonster.com/math/flashcards.html>

Practice with all operations: <http://www.math.com/students/practice/arithmetricpractice.htm>

Grade 5:

Multiplication Practice: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=Toolkit%20index2a>

Division Practice: <http://www.amblesideprimary.com/ambleweb/mentalmaths/dividermachine.html>

Skip Counting: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=Toolkit%20index2a>

Fraction Practice: <http://www.angliacampus.com/public/sec/maths/fract/index.htm>

Fraction/Percent: http://www.mathplayground.com/Matching_Fraction_Percent.html

Various Math Practice Games: http://www.mathplayground.com/SolveIt_main.html

Math Puzzle: <http://www.crickweb.co.uk/assets/resources/flash.php?&file=crazyc>

Flashcards: <http://www.factmonster.com/math/flashcards.html>

Practice with all operations: <http://www.math.com/students/practice/arithmetricpractice.htm>

Math Tips for Parents and Caregivers

Just as parents can help their children be ready to learn to read, they can give children a good start in learning math by helping them develop proficiency with informal math concepts and skills.

Before Children Enter School

- Play games such as dominoes and board games.
- Find natural opportunities to count, sort objects, to match collections of objects, to identify shapes (while reading bedtime stories, going up stairs, setting the table, etc.).
- Count a collection of objects and use number words to identify very small collections.
- Talk with your child about simple math problems and ideas. (How many spoons do we need to set the table? Give me the cup with two flowers on it. Find the other circle on this page. Sort the blocks by shape.)

After Children Enter School

- Have high expectations. Children's math achievement is shaped – and limited- by what is expected of them. Expect some confusion to be a part of the learning process but emphasize that effort, not ability, is what counts. Math is understandable and can be figured out.
- Avoid conveying negative attitudes toward math. Never tell children to not worry about a certain kind of math because it will never be used.
- Ask your child what he or she did in math class today. Ask him or her to give details and to explain.
- Expect your child's homework to include more than simple computation worksheets.
- Give your child meaningful problems that use numbers or shapes while you are going about everyday life. Ask the child to explain what he or she did.
- Be an advocate for the theme of math proficiency in textbooks, assessments, and instruction.
- Support professional development activities for teachers and administrators.

Rationale for Using Games in Math Class

- ✓ Reinforce skills
- ✓ Provide repeated practice
- ✓ Alternative to worksheets; flashcards
- ✓ Opportunity to interact with other students
- ✓ Promote cooperation
- ✓ Allow risk-taking in non-threatening situation
- ✓ Opportunities to develop and test strategies
- ✓ Promote logical reasoning skills
- ✓ Teachers gain insights into student thinking/reasoning
- ✓ Informal assessment opportunity