

Skills and Concepts
181-190

Add and Subtract Whole Numbers

Provide students with a hundreds chart.

Problem:

Misaki went to the Post Office and bought 28 stamps. How many more stamps would she need to have total of 100 stamps.

- How many stamps did Misaki start with?
- How many stamps did she need?
- Discuss the strategy that the student(s) chose.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

DesCartes Learning Statements

Uses models to calculate differences through 100 (whole numbers)*

Subtracts a 2-digit number from a 2-digit number, with **regrouping**

Subtracts 2- and/or 3-digit numbers with **no regrouping**

Skills and Concepts
201 - 210

Add and Subtract Whole Numbers

Problem:

Suppose your family is taking a special trip. On this trip, you will travel exactly 1000 miles. After a couple of days of traveling, you have gone 630 miles. How many more miles do you still have to go to reach 1000?

$$630 + 300 = 930$$

$$930 + 70 = 1000$$

Adding up

$$1000 - 300 = 700$$

$$700 - 70 = 630$$

Subtracting back

DesCartes Learning Statements

Adds and **subtracts** whole numbers using **place value**

Subtracts 3- or 4-digit numbers with **regrouping**

Skills and Concepts
191 - 200

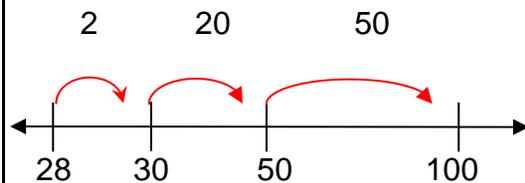
Add and Subtract Whole Numbers

Provide students with a blank number line.

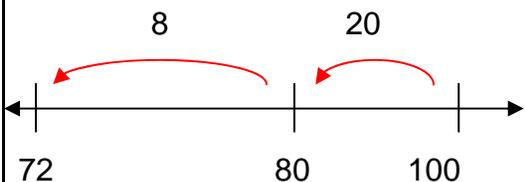
Problem:

Misaki went to the Post Office and bought 28 stamps. How many more stamps would she need to have total of 100 stamps.

- How many stamps did Misaki start with?
- How many stamps did she need?
- Discuss the strategy that the student(s) chose.



Adding up



Subtracting back

DesCartes Learning Statements

Uses number line to construct subtraction facts with subtrahends and minuends through 20 (whole numbers)

Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on)

Skills and Concepts
211 - 220

Add and Subtract Whole Numbers

p. 63 Investigations Teacher's Ed.

Problem:

$$1,569 - 275 = \mathbf{1,294}$$

$$1,569 - 200 = 1,369$$

$$1,369 - 60 = 1,309$$

$$1,309 - 5 = 1,304$$

$$1,304 - 10 = 1,294$$

1. Explain what happened in this problem.
2. Create a problem, work the solution, and explain the steps you took to solve the problem.

DesCartes Learning Statements

Adds and **subtracts** whole numbers using **place value**

Subtracts 3- or 4-digit numbers with **regrouping**

Skills and Concepts
221 - 230

Add and Subtract Whole Numbers

Subtraction Starter Problems
Student book p. 30

There are three ways to start this problem. Solve each start, then choose two of the starts and solve the rest of the problem.

Problem: $2168 - 455 =$

- a. $2148 - 400 =$
- b. $455 - 45 =$
- c. $2168 - 460 =$

- 
1. Put this problem into a story context.
 2. Identify which strategy makes the most sense to you. Why?
 3. Explain how these three strategies are alike and different.

DesCartes Learning Statements

Models algorithms using **place value** concepts
(addition and subtraction with whole numbers)*

Skills and Concepts
231 - 240

Add and Subtract Whole Numbers

Solve the following problem using all three strategies:

- a. Subtracting in parts
- b. Adding up
- c. Subtracting back

Problem: $1205 - 732 =$

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1. Evaluate whether your work is clear and concise.
 2. Is there a way to make your work more clear or concise?
 3. Create additional problems and story context for each of the three strategies,
 4. Determine if these strategies would work for decimals.
 5. Explain and model your answer.

DesCartes Learning Statements

Models algorithms using **place value** concepts
(addition and subtraction with whole numbers)*

Skills and Concepts
240 +

Add and Subtract Whole Numbers

Analyze subtraction algorithms used in other countries.

Step 1: Become familiar with each procedure by trying it out. Make up some more problems for yourself in order to develop facility with this approach.

Step 2: Discuss with others in the group why the method works. You may want to use words, manipulatives, diagrams, or any combination of these.

Step 3: Create and solve a problem using each of these algorithms.

Method A

$$\begin{array}{r} 5\cancel{3} \\ - \cancel{4}38 \\ \hline 15 \end{array}$$

You can't take 8 from 3, so you make the three 13. That means you have to make the 3 tens you're taking away into 4 tens. Then you subtract: 8 from 13 is 5, 4 from 5 is 1.

Method B

$$\begin{array}{r} 53 \quad 53 \\ - 38 \quad + 61 \\ \hline \cancel{1}14 \\ + 1 \\ \hline 15 \end{array}$$

Transform into an addition problem by subtracting each number in the bottom (subtrahend) from 9. Thus, 3 becomes 6, 8 becomes 1. Now add. When done, drop the 1 in the largest place and add 1 to the ones place to get the answer 15.

DesCartes Learning Statements

Models algorithms using **place value** concepts (addition and subtraction with whole numbers)*

Skills and Concepts
171-180

Add and Subtract Whole Numbers

Provide students with a hundreds chart.

Problem:

The Johnson family traveled to Yosemite National Park. At the gas station, the trip meter read 20 miles. At the Tourist Information Center, the trip meter read 97 miles. How far did they travel from the gas station to the information center?

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91	92	93	94	95	96	97	98	99	100

DesCartes Learning Statements

Uses models to calculate differences through 100 (whole numbers)*

Subtracts a 1-digit number from a 2-digit number with **no regrouping**, vertically

Subtracts a 2-digit number from a 2-digit number, with **regrouping**