

# Relating Subtraction to Addition

**Goal**

Use fact families to relate addition and subtraction.

1. Charlie has read 8 books this month.  
He plans to read 4 more.

- a) Complete the number sentences  
to tell about Charlie's books.

$$8 + \underline{4} = 12$$

$$\underline{8} + 4 = 12$$

- b) Write 2 subtraction sentences from the same fact family.

$$\underline{12 - 4 = 8, 12 - 8 = 4}$$

2. Sam wants to read 15 books this month. He has read 7.  
Calculate the number of books he has left to read.

8

3. Calculate each missing number. Then write a subtraction  
sentence that belongs to the same fact family.

a)  $8 + \underline{5} = 13$

b)  $\underline{8} + 6 = 14$

c)  $\underline{10} + 5 = 15$

$13 - 8 = 5$

$14 - 6 = 8$

$15 - 5 = 10$

4. a) Create an addition or subtraction problem about books  
you plan to read and books you have read already.

For example: I want to read 12 books this month. I have read 2 so far.

How many more do I need to read?

- b) Write the fact family for your problem. \_\_\_\_\_

$10 + 2 = 12, 2 + 10 = 12, 12 - 2 = 10, 12 - 10 = 2$

**At-Home Help**

Number sentences that tell  
about the same situation are  
called a **fact family**.

The fact family for 3, 4, and 7 is

$$3 + 4 = 7 \quad 7 - 3 = 4$$

$$4 + 3 = 7 \quad 7 - 4 = 3$$

# Adding and Subtracting Tens

**Goal** Add and subtract tens.

1. Complete each number sentence.

a)  $40 + 30 = \underline{70}$       d)  $80 - 60 = \underline{20}$

b)  $50 + 60 = \underline{110}$       e)  $60 - 30 = \underline{30}$

c)  $70 + 50 = \underline{120}$       f)  $140 - 70 = \underline{70}$

2. Write the addition or subtraction fact that you will use to calculate each answer. Then add or subtract.

a)  $\underline{3 + 8 = 11}$       c)  $\underline{14 - 7 = 7}$

$$\begin{array}{r} 30 \\ + 80 \\ \hline 110 \end{array}$$

$$\begin{array}{r} 140 \\ - 70 \\ \hline 70 \end{array}$$

b)  $\underline{5 + 9 = 14}$       d)  $\underline{13 - 6 = 7}$

$$\begin{array}{r} 50 \\ + 90 \\ \hline 140 \end{array}$$

$$\begin{array}{r} 130 \\ - 60 \\ \hline 70 \end{array}$$

3. Jessica has 80 Canadian stamps and 70 other stamps. How many stamps does Jessica have? Show your work.

$$80 + 70 = 150 \text{ stamps}$$

4. Todd also collects stamps. He has 120 Canadian stamps and 50 other stamps. How many more Canadian stamps than other stamps does Todd have? Show your work.

$$120 - 50 = 70 \text{ more Canadian stamps}$$

## At-Home Help

Use number facts to help add and subtract groups of tens. Solve the number fact first and then add or subtract the tens.

To add 40 and 50, use  $4 + 5 = 9$ , so

$$\begin{array}{r} 4 \text{ tens} \quad \text{or} \quad 40 \\ + 5 \text{ tens} \quad \quad \quad + 50 \\ \hline 9 \text{ tens} \quad \quad \quad 90 \end{array}$$

To subtract  $130 - 50$ , use  $13 - 5 = 8$ , so

$$\begin{array}{r} 13 \text{ tens} \quad \text{or} \quad 130 \\ - 5 \text{ tens} \quad \quad \quad - 50 \\ \hline 8 \text{ tens} \quad \quad \quad 80 \end{array}$$

# Mental Addition and Subtraction

**Goal**

Use mental math strategies to add and subtract 1-digit and 2-digit numbers.

1. Use mental math to solve these problems.  
 Colour boxes with even answers blue.  
 Colour boxes with odd answers red.

$24 + 8$ $= 32$ (blue)	$35 + 2$ $= 37$ (red)	$26 - 7$ $= 19$ (red)	$29 + 9$ $= 38$ (blue)
$43 + 3$ $= 46$ (blue)	$55 + 9$ $= 64$ (blue)	$36 - 8$ $= 28$ (blue)	$65 - 9$ $= 56$ (blue)
$53 - 8$ $= 45$ (red)	$45 + 5$ $= 50$ (blue)	$27 + 7$ $= 34$ (blue)	$68 + 9$ $= 77$ (red)
$35 - 9$ $= 26$ (blue)	$42 + 7$ $= 49$ (red)	$20 - 5$ $= 15$ (red)	$61 - 5$ $= 56$ (blue)

## At-Home Help

Mental math strategies are used to calculate without paper and pencil. Number relationships are often used to make it easier to add and subtract mentally.

For example, to calculate  $25 + 9$ , think  $25 + 10 = 35$ .

But that's 1 too much, so subtract 1.

$$35 - 1 = 34$$

To subtract  $25 - 7$ , think  $25 - 5 = 20$ .

But there's still 2 more to subtract.

$$20 - 2 = 18$$

To subtract  $41 - 8$ , think  $41 - 10 = 31$ .

But that's 2 too few, so add back 2.

$$31 + 2 = 33$$

2. Did you colour more red boxes or blue boxes? blue

How many more? 4

# Solve Problems by Acting Them Out

**Goal** Solve addition and subtraction problems by acting them out.

You will need buttons, bread tags, toothpicks, or other small items to use as counters.

Show your work.

1. Sharleen's book has 48 pages. She read 8 pages on Sunday. She reads 8 pages every day after that. What day will she finish the book?

Sunday 8, Monday 16, Tuesday 24, Wednesday 32,  
Thursday 40, Friday 48

book finished on Friday

2. Liam has 18 hockey cards. Every day he adds 6 new cards and gives away 4 cards.

How many cards will he have after 5 days?

$$\text{day 1: } 18 + 6 - 4 = 20$$

$$\text{day 2: } 20 + 6 - 4 = 22$$

$$\text{day 3: } 22 + 6 - 4 = 24$$

$$\text{day 4: } 24 + 6 - 4 = 26$$

$$\text{day 5: } 26 + 6 - 4 = 28$$

28 cards after 5 days

3. Callum had 10 hockey cards. Brandon, Maria, and Hector each gave him the same number of cards. Callum ended up with between 20 and 30 cards.

- a) How many cards did each friend give Callum?

$$4 + 4 + 4 = 12 \text{ and } 10 + 12 = 22, \text{ so } 4 \text{ cards each}$$

- b) Find 2 other possible answers.

$$5 + 5 + 5 = 15 \text{ and } 10 + 15 = 25, \text{ so } 5 \text{ cards each}$$

$$6 + 6 + 6 = 18 \text{ and } 10 + 18 = 28, \text{ so } 6 \text{ cards each}$$

## At-Home Help

**Acting it out** is a problem-solving strategy. Materials are used to support actions.

For example, consider this problem:

Each day Jared saw 2 more birds than he did the previous day. He saw 4 birds on Monday. How many birds did he see altogether from Monday to Thursday?

To solve this problem, do actions such as:

- Place 4 counters for Monday.
- Add 2 more than 4, or 6, counters for Tuesday.
- Add 8 counters for Wednesday.
- Add 10 counters for Thursday.
- Count all the counters.

Jared saw 28 birds altogether.

# Estimating Sums and Differences

**Goal**

Estimate sums and differences of 2-digit numbers.

1. Estimate. Show your work.

a)  $56 + 43$  is about

$$\underline{60 + 40 = 100}$$

b)  $77 - 48$  is about

$$\underline{80 - 50 = 30}$$

c)  $27 + 17 + 12$  is about

$$\underline{30 + 20 + 10 = 60}$$

d)  $36 + 19 + 21$  is about

$$\underline{40 + 20 + 20 = 80}$$

e)  $89 - 61$  is about

$$\underline{90 - 60 = 30}$$

**At-Home Help**

Estimating helps you to determine if an answer is reasonable. One way to estimate is to round one or both numbers to the nearest ten.

$38 + 24$  is about  
 $40 + 20$ , or 60.

or

$38 + 24$  is about  
 $40 + 24$ , or 64, if adding to a multiple of ten is easy enough to do mentally.

Estimate. Circle the letter of the best estimate.

2. 
$$\begin{array}{r} 46 \\ + 38 \\ \hline \end{array}$$

A. 50   B. 60   C. 70   **D. 90**

4. 
$$\begin{array}{r} 66 \\ + 51 \\ \hline \end{array}$$

A. 100   **B. 120**   C. 140   D. 150

3. 
$$\begin{array}{r} 59 \\ - 32 \\ \hline \end{array}$$

E. 10   F. 20   **G. 30**   H. 50

5. 
$$\begin{array}{r} 83 \\ - 67 \\ \hline \end{array}$$

**E. 10**   F. 30   G. 140   H. 150

6. Why might you estimate  $26 + 78$  as  $25 + 75$ ?

For example, because adding  $25 + 75$  is easy. It's 100 and is close to  $26 + 78$ .

---



---

# Adding 2-Digit Numbers

**Goal** Add 2-digit numbers with and without regrouping.



ball  
82¢



toy car  
58¢



key chain  
44¢



book  
75¢

- Dan spent 119¢. Circle the letter of the 2 items he bought.
  - ball and book
  - book and key chain**
  - car and book
  - ball and toy car
- Jane bought a ball and a book. Circle the letter of how much she spent.
  - 150¢
  - 126¢
  - 157¢**
  - 147¢
- Sari spent 102¢. Circle the letter of the 2 items she bought.
  - ball and key chain
  - book and toy car
  - key chain and toy car**
  - book and key chain
- Calculate each sum.

$$\begin{array}{r} \text{a)} \quad 56 \\ + 73 \\ \hline 129 \end{array}$$

$$\begin{array}{r} \text{b)} \quad 75 \\ + 38 \\ \hline 113 \end{array}$$

$$\begin{array}{r} \text{c)} \quad 95 \\ + 27 \\ \hline 122 \end{array}$$

$$\begin{array}{r} \text{d)} \quad 47 \\ + 86 \\ \hline 133 \end{array}$$

## At-Home Help

There is more than one way to add larger numbers. Here are 3 ways to add:

$$\begin{array}{r} 37 \\ + 78 \\ \hline \end{array}$$

First add the tens.

$$30 + 70 = 100$$

Next add the ones.

$$7 + 8 = 15$$

Then add the tens and ones.

$$100 + 15 = 115$$

or

First add the ones.

$$7 + 8 = 15$$

Next trade 10 ones for 1 ten.

15 becomes 1 ten and 5 ones.

Then add the tens.

$$3 \text{ tens} + 7 \text{ tens} + 1 \text{ ten} = 11 \text{ tens}$$

$$11 \text{ tens and } 5 \text{ ones} = 115$$

or

Since 37 is 3 less than 40 and

78 is 2 less than 80, add

$$40 + 80 = 120.$$

But that is 5 (3 + 2) too many,

$$\text{so } 120 - 5 = 115.$$

# Subtracting 2-Digit Numbers

**Goal**

Subtract 2-digit numbers with and without regrouping.

Show your work.

1. Brady counted 55 cars on the way to school.  
Ben counted 37 cars.  
How many more cars did Brady count?

18

2. Louise skipped 62 times in a row.  
Harry skipped 48 times.

- a) How many more times did Louise skip than Harry?

14

- b) Maria skipped 86 times in a row.  
How many more times did Maria skip than Louise?

24

- c) How many more times did Maria skip than Harry?

38

3. Calculate each difference.

a) 
$$\begin{array}{r} 48 \\ - 27 \\ \hline 21 \end{array}$$

b) 
$$\begin{array}{r} 71 \\ - 33 \\ \hline 38 \end{array}$$

c) 
$$\begin{array}{r} 35 \\ - 18 \\ \hline 17 \end{array}$$

d) 
$$\begin{array}{r} 95 \\ - 69 \\ \hline 26 \end{array}$$

**At-Home Help**

This is one way to subtract 2-digit numbers with regrouping when you don't have base ten blocks.

For example, in

$$\begin{array}{r} 93 \\ - 56 \\ \hline \end{array}$$

you can't take 6 ones from 3 ones, but you can regroup 93 as 8 tens 13 ones.

$$\begin{array}{r} 8 \text{ tens } 13 \text{ ones} \\ 93 \\ - 56 \\ \hline 37 \end{array} \quad \begin{array}{r} 8 \text{ tens } 13 \text{ ones} \\ - 5 \text{ tens } 6 \text{ ones} \\ \hline 3 \text{ tens } 7 \text{ ones} \end{array}$$

# Test Yourself

Circle the correct answer.

1. Which number facts belong to the same fact family as  $9 + \blacksquare = 16$ ?

**A.**  $16 - 7 = \blacksquare$

**B.**  $9 + 16 = \blacksquare$

**C.**  $9 - 7 = \blacksquare$

**D.**  $10 + \blacksquare = 16$

2. What is  $40 + 70$ ?

**E.** 30

**F.** 100

**G.** 110

**H.** 120

3. Which is **not** a way to solve  $35 + 8$  mentally?

**A.** Add 10 to 35 and add another 2.

**B.** Add 10 to 35 and subtract 2.

**C.** Add 5 to 35 and add 3 more.

**D.** Subtract 2 from 35 and add 10.

4. Ian has 24 rocks from the schoolyard. On Monday he put 3 rocks back and got 5 new ones. He did that every day. How many rocks did he have on Friday?

**E.** 22

**F.** 26

**G.** 32

**H.** 34

5. What is the best estimate for  $71 - 49$ ?

**A.** 20

**B.** 30

**C.** 40

**D.** 50

6. What is the best estimate for  $64 + 57$ ?

**E.** 100

**F.** 110

**G.** 120

**H.** 130

7. Which of these sums has an answer of 145?

**A.**  $\begin{array}{r} 45 \\ + 27 \\ \hline \end{array}$

**B.**  $\begin{array}{r} 38 \\ + 44 \\ \hline \end{array}$

**C.**  $\begin{array}{r} 66 \\ + 79 \\ \hline \end{array}$

**D.**  $\begin{array}{r} 84 \\ + 58 \\ \hline \end{array}$

8. What is  $95 - 57$ ?

**E.** 38

**F.** 42

**G.** 47

**H.** 48