3.1 Solving Problems by Estimating Page 1

Pg. 69
#1-5

Student Book pages 68–69

GOAL

Estimate sums of 2-digit numbers to solve problems.
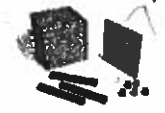
You will need
- base ten blocks
- a place value chart

Problem

Lang wrote a story.

His story has 3 pages.

- Page 1 has 21 words.
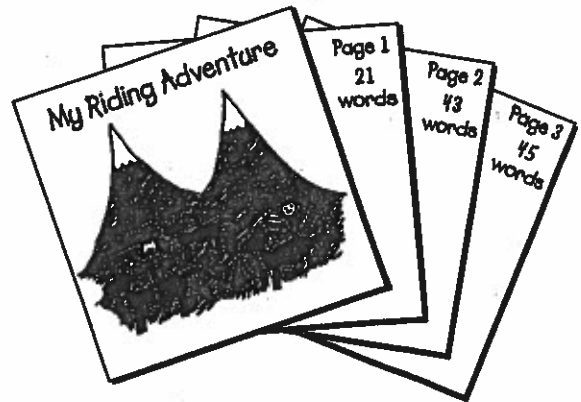- Page 2 has 43 words.
- Page 3 has 45 words.

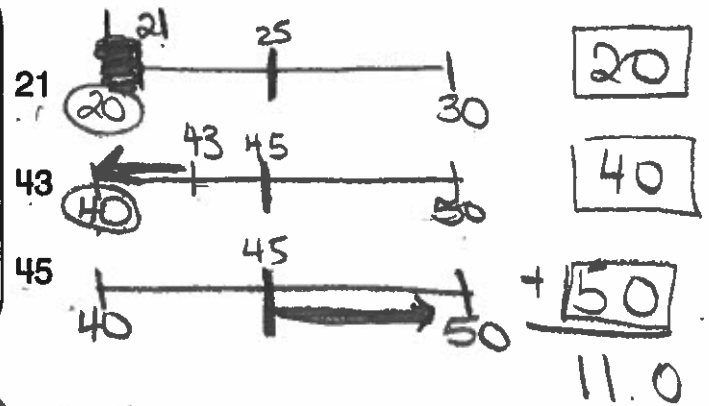**Did Lang write more than 100 words?**

Use base ten blocks to show the number of words on each page.

Hundreds	Tens	Ones

$$\boxed{100 + 9}$$

21 21 25 30 $\boxed{20}$
43 $\boxed{40}$ 43 45 50 $\boxed{40}$
45 45 40 50 $+ \boxed{50}$
11.0

Step 1: Count the tens.

How many tens are there? __10 tens is 100__

109 is between 100 and

estimate
100 – 110

110

$$\begin{array}{r} 20 \\ +48 \\ \hline 48 \end{array}$$ Front end

100

Step 2: Does Lang need to count the ones to know if he has more than 100 words? _No_ - just needs an estimate

How do you know?

I can see that there is more than 100 words when I added the tens

Did Lang write more than 100 words? _yes._

Reflecting

Jodi's story is 2 pages long.

Page 1 has 42 words.

Page 2 has 65 words.

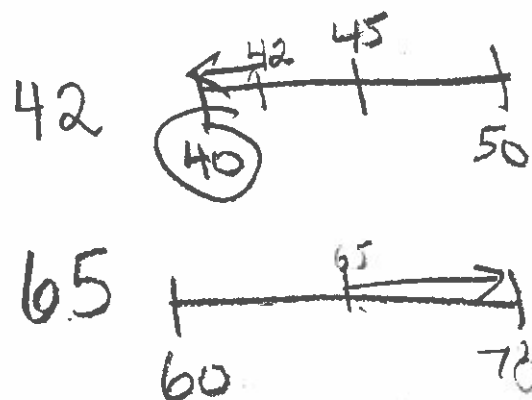$$\begin{array}{r} 40 \\ +60 \\ \hline 100 \end{array} \quad \text{over} \quad \underline{\underline{100}}$$

check
$$\begin{array}{r} +1 \\ 42 \\ +65 \\ \hline 10\ 7 \end{array} \checkmark$$

How can Jodi find out if she wrote more than 100 words?

She can use a number line or base 10 blocks. Add the tens to see if 100 or more.

	Tens	Ones
Page 1	ⅼ ⅼⅼⅼ	• •
Page 2	ⅼⅼⅼ / ⅼⅼⅼ	• • • • / • • •

42   65
60   70
40   50

100 words + 7 = 107

40 + 70 = 110

3.1 Solving Problems by Estimating Page 1

Student Book pages 68–69

GOAL

Estimate sums of 3-digit numbers to solve problems.

You will need

- base ten blocks
- a place value chart

Checking

1. Maya wrote a story.

   The first page had 275 words.

   The second page had 250 words.

   Does her story have more than 500 words?

   Step 1: Circle the kind of answer you need: exact   (estimate)

   How do you know?

   I know because she needs 500 words not exact - could be over too.

   Step 2: Model 275 and 250 with base ten blocks.

   Draw your models in the place value chart.

Number	Hundreds	Tens	Ones
275			
250			

   I see 400 and more than 10 – tens.

   Did Maya write more than 500 words? _yes_

   How do you know?

   When I add 275 plus 250 I get 525 which is more than 500.

3.1 Solving Problems by Estimating Page 2

Practising

4. Your school has $800 to spend on a computer
   and a printer.
   The computer costs $575.
   The printer costs $275.
   Does your school have enough money?

Step 1: (Circle) the kind of answer you need: (exact)   estimate

Step 2: Estimate 575 + 275.
Model the numbers using base ten blocks.
Draw your models.

Number	Hundreds	Tens	Ones
575			
275			

_8_   _5_   _0_

Does your school have enough money? __no__

How do you know?
__We are $50 over —oh no!!__

_____

Checking & Practising BLM 3.1: Solving Problems by Estimating |

Chapter 3 Lesson 1

Solving Problems by Estimating

GOAL

Estimate sums of 3-digit numbers to solve problems.

(handwritten work in margin)

check
a) $\overset{1\,\overset{+}{1}\,1}{298}$
   $+105$
   $\overline{403}$

b) $\overset{7\,1\,1}{202}$
   $+298$
   $\overline{500}$
   $+1$

c) $\overset{1}{}96$
   $+53$
   $\overline{149}$

d) $\overset{+1}{161}$
   $+288$
   $\overline{449}$

1. Use mental math to calculate the first sum.
   Use that sum to estimate the next sum.

   a) 300 + 100 = __400__, so 298 + 105 = about __400.__

   b) 200 + 300 = __500__, so 202 + 298 = about __560__ ✓

   c) 100 + 50 = __150__, so 96 + 53 = about __150__ ✓

   d) 150 + 300 = __450__, so 161 + 288 = about __450__ ✓

2. Estimate each sum. Show your work.

   a) 249 + 199 is about __250 + 200 = 450__ 200+200=400

   b) 96 + 402 is about __100 + 400 = 500__

   c) 353 + 47 is about __350 + 50 = 400__

   d) 208 + 297 is about __200 + 300 = 500__

3. Cole's father saved $600 for furniture. He wants to buy a rug
   for $277 and a lamp for $303. Does he have enough money?
   Show your work.

   __300__ + __300__ = 600 ✓ Yes because he estimated higher than he needed to.

   check
   $+1$
   277
   $+303$
   $\overline{580}$

4. Kate made 200 brownies. She needs 145 brownies for
   a bake sale, and she needs 48 brownies for her class at school.
   Did she make enough brownies?

   __150__ + __50__ = 200 ✓ Yes because she estimated high

   check
   $+1$
   145
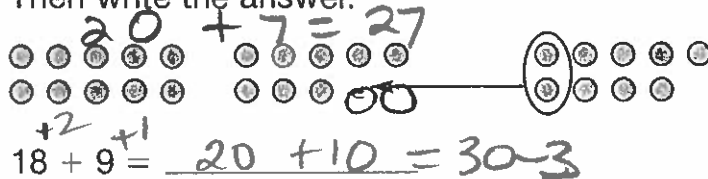 $+48$
   $\overline{193}$

Adding Mentally

answer.

Goal Use mental math strategies to add 2-digit numbers.

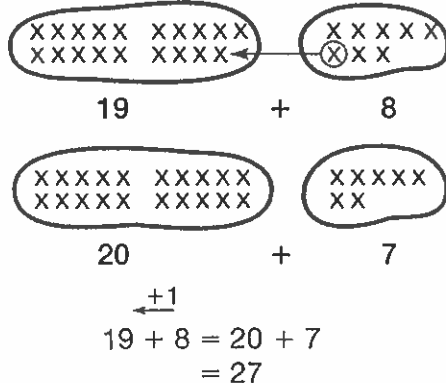1. Move counters to make the addition easier.
   Then write the answer.

   $20 + 7 = 27$

   $18 + 9 = \underline{20 + 10} = 30 - 3$

2. Use mental addition.

   a) $20 + 30 = \underline{50}$

   b) $50 + 20 = \underline{70}$

   c) $19 + 31 = \underline{20 + 30 = 50}$

   d) $18 + 32 = \underline{20 + 30 = 50}$

   e) $49 + 21 = \underline{50 + 20 = 70}$

3. Use mental math to solve these problems.

   a) There are 38 students in Mrs. Jones's classroom and 23 students in Mr. Singh's classroom.
      How many students are there altogether? $\underline{61}$

      $40 + 20 = 60 + 1$

   b) Payden has 48 cents and Jill has 22 cents.
      How much money do they have altogether? $\underline{70}$

      $50 + 20 = 70$

   c) Avis is 19. Her grandmother is 58 years older.
      How old is Avis's grandmother? $\underline{77}$

      $20 + 60 = 80 - 3$

   d) There are 37 cans on one shelf and 43 on another.
      How many cans are there altogether? $\underline{80}$

      $40 + 40 = 80$

   e) There are 28 large paper clips and 38 small paper clips.
      How many paper clips are there altogether? $\underline{66}$

      $30 + 40 = 70 - 4$

Rounding Numbers

Round 473 to the nearest 10.

0 1 2 3 4 ← round down
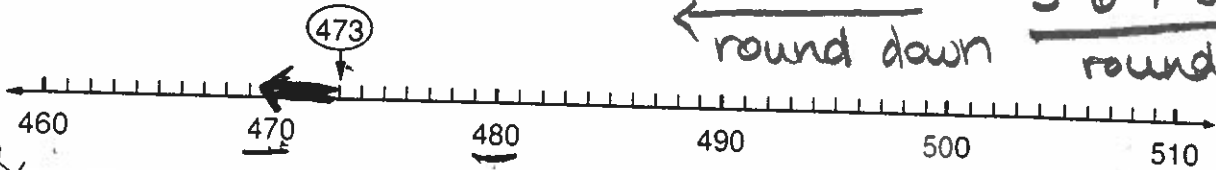
5 6 7 8 9 round up

```
460      470      480      490      500      510
                  473
```

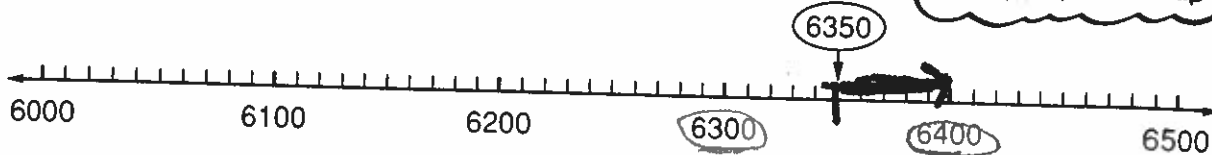Think: the closest multiples of 10 are 470 and 480.

473 is closer to 470.

473 rounded to the nearest 10 is 470.

Use the number lines to complete the sentences.

Round 6350 to the nearest 100.

When a number is halfway between 2 multiples, round up.

1.

```
6000     6100     6200     6300     6400     6500
                                 6350
```
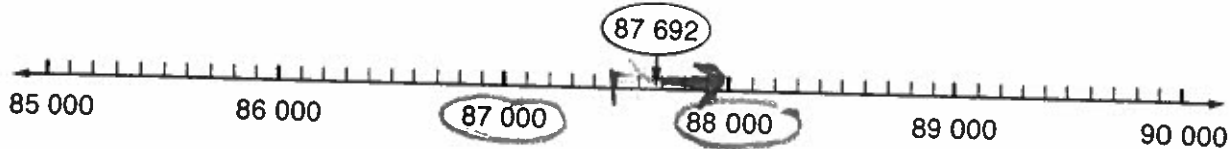
Think: the closest multiples of 100 are 6300 and 6400

6350 is halfway between 6300 and 6400.

6350 rounded to the nearest 100 is 6400

Round 87 692 to the nearest 1000.

2.

```
85 000   86 000   87 000   88 000   89 000   90 000
                        87 692
```

Think: the closest multiples of 1000 are 87 000 and 88 000

87 692 is closer to 88 000

87 692 rounded to the nearest 1000 is 88 000

Round the numbers. Use the number lines above if you wish.

3. 497 to the nearest 10 __500__

4. 6420 to the nearest 100 __6400__

5. 6180 to the nearest 100 __6 200__

6. 89 500 to the nearest 1000 __90 000__

Multiples of 10, 100, and 1000

Count by 10. Write the multiples of 10 between 20 and 130.

> A multiple of 10 is a number whose last digit is 0.

30, 40, 50, 60, 70, 80, 90, 100, 110, 120

Complete.

1. Count by 100. Write the multiples of 100 between 600 and 1500.

> A multiple of 100 is a number whose last 2 digits are 0.
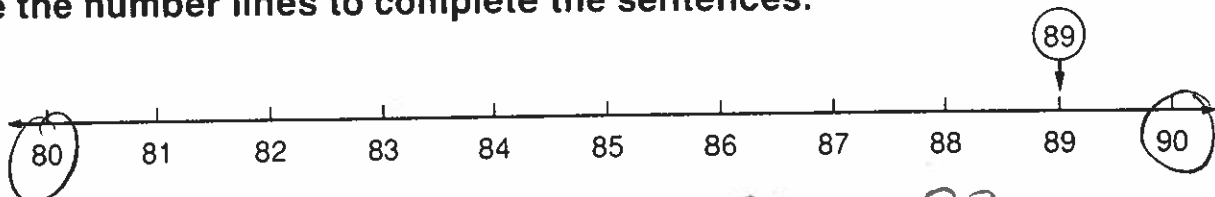
700, _800_, 900, _1000_, 1100, _1200_, 1300, _1400_

2. Count by 1000. Write the multiples of 1000 between 53 000 and 59 000.

> A multiple of 1000 is a number whose last 3 digits are 0.

54 000, _55 000_, 56 000, _57 000_, _58 000_
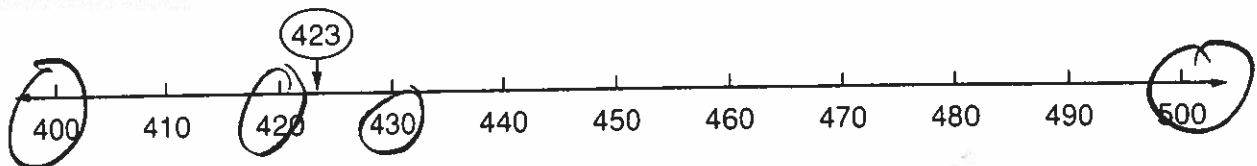
Use the number lines to complete the sentences.

3.

80 81 82 83 84 85 86 87 88 89 90

(89) (80) (90)

The multiples of 10 on the number line are _80_ and _90_.

The multiple of 10 closer to 89 is _90_.

4.

400 410 420 430 440 450 460 470 480 490 500

(423) (400) (420) (430) (500)

The multiples of 100 on the number line are _400_ and _500_.

The multiple of 100 closer to 423 is _400_.

5.

3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000

(3878) (3000) (3900) (4000)

The multiples of 1000 on the number line are _3000_ and _4000_.

The multiple of 1000 closer to 3878 is _4000_.

Name: _____ Date: _____

3.2 Estimating Sums Page 1

Student Book pages 70–72

GOAL

Estimate sums in different ways.

Problem

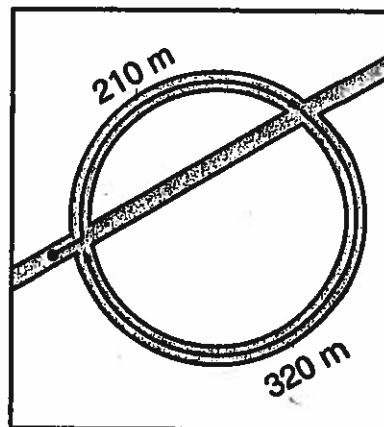Aneela plans to run the route shown at the right.

About how far will Aneela run?

Use two ways to estimate.

Estimate by adding the hundreds

Write the numbers in the place value chart.

The first one is done for you.

(handwritten, top right) Front end $+\begin{array}{r}200\\300\\\hline 500\end{array}$

Number	Hundreds	Tens	Ones
210	2	1	0
320	3	2	0

(handwritten below) $+ \quad 5 \qquad 0 \qquad 0$

(Circle) the hundreds.

Add the circled hundreds.

$\underline{200} + \underline{300} = \underline{500}$

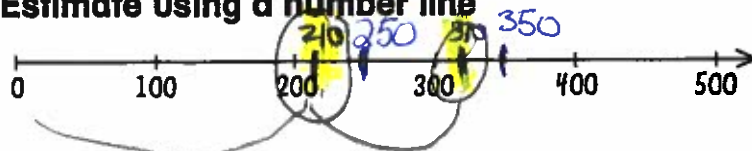Aneela will run about ___500___ m.

(handwritten, right)

I can make a range between 500–700

$200 + 300 = 500$
$300 + 400 = 700$

3.2 Estimating Sums Page 2

Estimate using a number line

```
      210 250  310 350
0    100   200    300   400   500
```

Step 1: Find 210 on the number line.

200 is the closer hundred. ✓

Step 2: 310 is close to 300. $200 + 300 = 500$

Start at 200 and jump 300 m.

Aneela will run about ___**500**___ m.

Reflecting

How would you estimate 280 + 190? $300 + 200 = 500$ $280 + 190 = 470$

We can round both to the closest
hundred spot then add.
$280 + 190 = 470$

$$300 + 200 = 500$$

$$\begin{array}{r} {}^{+1} \\ 2\,8\,0 \\ +1\,9\,0 \\ \hline 4\,7\,0 \end{array}$$

What other ways can you use to estimate sums?

① We can round using
front end method

$$\begin{array}{r} 200 \\ +100 \\ \hline 300 \end{array}$$

② We can also round (280)
to the tens   (190)

$$\begin{array}{r} 280 \\ +190 \\ \hline 470 \end{array}$$
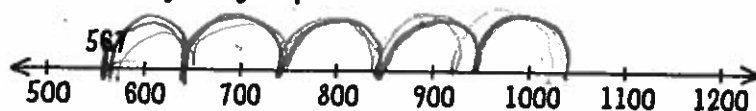
3.2 Estimating Sums Page 2

Practising

2. Estimate.

a) ⑤⑥⑦ + ⑤13

Add the closer hundreds using the number line.

Record all your jumps.

$$500 + 500 = 1000$$
between
$$1000 - 1100$$

567 + 513 is about ___1067__.7 ✓

4. The chart shows the number of people who went to a 3-day folk festival.

Estimate the total attendance.

Day	Attendance
Thursday	829
Friday	1799
Saturday	2375

900
2000
2000
4900

⟨4900⟩

Circle the closer hundreds.

800	899	⟨900⟩
1700	1799	⟨1800⟩
2300	2375	⟨2400⟩

Add the circled numbers.

___900__ + __1800__ + __2400__ = __5100__
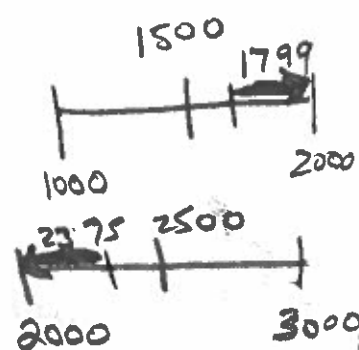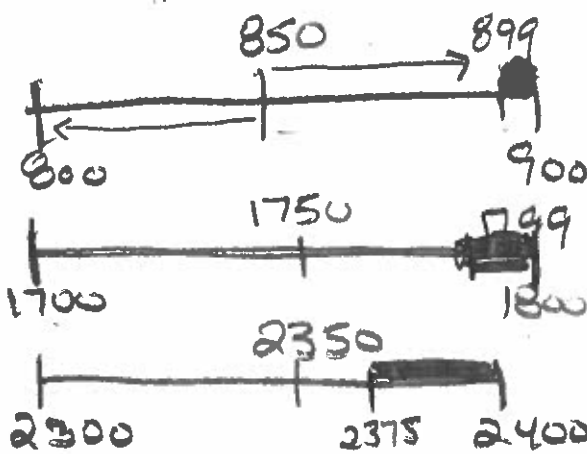
About how many people attended the festival? __5000__

3.2 Estimating Sums Page 1
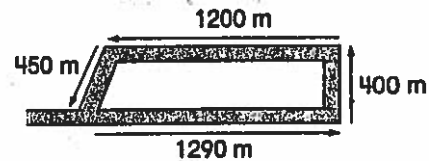
Student Book pages 70–72

GOAL

Estimate sums in different ways.

Checking

1. Kate plans to run the route shown at the right.

Estimate how far she will run by adding the thousands.

1200 m
450 m
400 m
1290 m

Write the numbers in the place value chart.
The first one is done for you.

Number	Thousands	Hundreds	Tens	Ones
400	0 +1	+12 4	0	0
1290	1 +1	2	9	0
450		4	5	0
1200	1	2	0	0
	3	8	4	0

(Circle) the thousands.
Add the circled thousands.

1000 + 1000 = 2000   actual 3340.

Kate will run about ___2000___ m.

Explain one other way you could estimate how far Kate will run.

I could add the hundreds
with the 1000's   400
                       200
2000 + 1200 = 3200 + 400
2000 + 1000 = 3000   + 200

answer key

Chapter 3
Lesson 2
Estimating Sums

GOAL

Estimate sums in different ways.

1. Estimate each sum. Show your work.

   a) 210 + 499 is about

   $200 + 500 = 700$ OR $210 + 500 = 710$

   b) 589 + 308 is about 908

   $600 + 308 = 908$ or $600 + 300 = 900$

   c) 1072 + 994 is about

   $1000 + 1000 = 2000$

   d) 3987 + 2001 is about

   $4000 + 2000 = 6000$

2. Estimate each sum. Show your work.

   a) 510 + 203 + 696 is about $500 + 200 + 700 = 1400$

   b) 1080 + 5098 + 2900 is about $1000 + 5000 + 3000 = 9000$

   c) 929 + 1100 + 997 is about $9000 + 1000 + 1000 = 3000$

   d) 2033 + 1002 + 1977 is about $2000 + 1000 + 2000 = 5000$

   e) 3172 + 3030 + 2960 is about $3000 + 3000 + 3000 = 9000$

   f) 1072 + 2908 + 3978 is about $1000 + 3000 + 4000 = 8000$

3. Jade wants to collect 8000 pennies, or $80. She has a jar with 1048 pennies, a jar with 2083 pennies, and a jar with 3992 pennies. Does Jade have enough pennies? How do you know?

   NO because she only has 8000.

   $1000 + 2000 + 4000 = 7000$

Estimating Sums

Goal **Estimate sums by rounding.**

1. Estimate. Show your rounded numbers.

   a) 1867 + 913 is about equal to

   _2000 + 1000 = 3000_

   b) 3611 + 1489 is about equal to

   _4000 + 1500 = 5500_

   c) 1156 + 2722 is about equal to

   _1000 + 3000 = 4000_

   d) 999 + 1999 is about equal to

   _1000 + 2000 = 3000_

2. Estimate the answers to these problems. Show your rounded numbers.

   a) Jack's mother drove 1245 km on Saturday and 985 km on Sunday. About how many kilometres did she drive on those 2 days?

   1000 + 1000 = 2000

   b) 4856 people live in one town. 3345 live in another town. About how many people live in the 2 towns?

   5000 + 3000 = 8000

   about 8000 people live in both towns.

3. Use rounded numbers to find whether $5000 is enough to buy both items in each part. Check your answers using a calculator.

   a) $1648 $4567   No, not enough
   1500 + 4500 = 6000
   6000 > 5000.

   b) $1219 $2511   1200 + 2500 = 3700
   Yes, enough because
   5000 > 3700.

Try These

1. Circle the best estimate. Explain how you estimated.

possible estimates

a) 2̶1̶ + 3̶3̶   20+ 30   (50)   (60)   70

20 + 30 = 50

b) 4̶8̶ + 4̶6̶   80   90   (100)

50 + 50 = 100

c) 37 + 25   50   60   (70)

40 + 30 = 70

2. Estimate each sum.
Show the numbers you used to estimate.

a) 32 + 41 is about __70__.

30 + 40 = 70

b) 17 + 58 is about __80__.

20 + 60 = 80

c) 29 + 36 is about __70__.

30 + 40 = 70

3. Arya uses a 100 chart to add 27 + 28.
He adds 28 in parts by adding 20
and then adding 8.
To add 20, go down 2 rows.
To add 8, go forwards 8 or
go down 1 row (that's + 10)
and then back 2 (that's − 2).
Use the 100 chart to add.
Use a different colour for each addition.

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

a) 22 + 11 = __32__   22+10   c) 24 + 69 = __94__   24+70

b) 63 + 33 = __93__   d) 78 + 17 = __98__   78+20

63+30 = 93

Name: _____   Date: _____

4. What is the total cost?

a)

$16 + 23 = \boxed{39}$

$20 + 20 = 40$
$16 + 20 = 36$
$20 + 23 = \$3$

b)
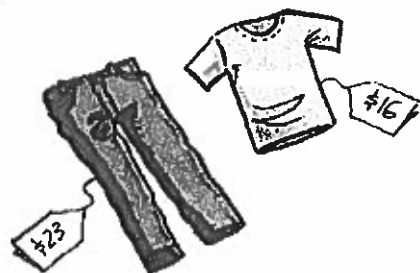
$\overset{+1}{26} + 65 = \boxed{91}$

$30 + 70 = 100$
$30 + 65 = 95$
$26 + 70 = 96$

c)
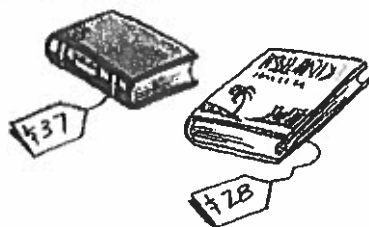
$\overset{+1}{37} + 28 = \boxed{65}$

$40 + 30 = 70$
$37 + 30 = 67$
$40 + 28 = 68$

5. Show 2 ways to complete each addition.

a) 48 + 7

$50 + 7 = 57$	$48 + 10 = 58$

$50 + 10 = 60$

b) 67 + 24

$70 + 24 = 94$	$67 + 20 = 87$

$70 + 20 = 90.$

Name: ___teacher___ Date: __Jan 22__

3.4 Adding from Left to Right Page 1

Student Book pages 74–76

GOAL

Solve addition problems by adding from left to right.

You will need
- base ten blocks
- a place value chart

Problem

A forklift operator wants to lift 3 containers.

The forklift can safely lift up to 400 kg.

Can the forklift safely lift all 3 containers?

212 kg Bottled Water

123 kg Soup Cans

54 kg Juice Boxes

Use base ten blocks.

Step 1: Model each number with base ten blocks.

Draw your models.
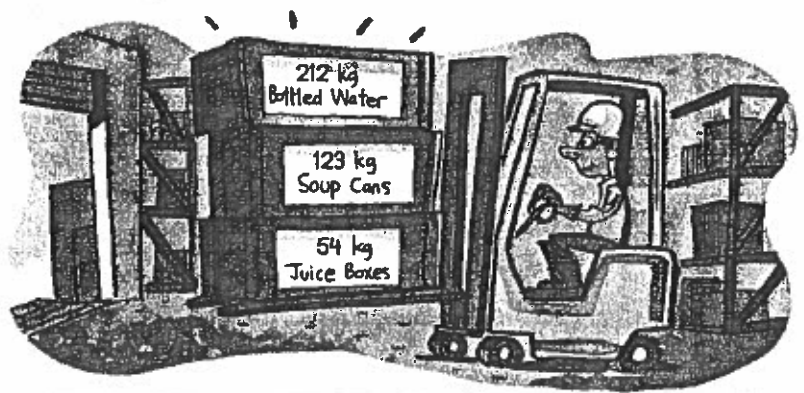
Hundreds	Tens	Ones	
□ □	|	╵ ╵	212
□	| |	╵ ╵ ╵	123
	| | | | |	╵ ╵ ╵ ╵	54

$$300 + 80 + 9 = 389$$

3.4 Adding from Left to Right Page 2

Step 2: Add the hundreds.

$200 +$ __100__ $+$ __0__ $=$ __300__

Step 3: Add the tens.

$10 +$ __20__ $+$ __50__ $=$ __80__

Step 4: Add the ones.

$2 +$ __3__ $+$ __4__ $=$ __9__

Step 5: Add the hundreds, tens, and ones.

__300__ $+$ __80__ $+$ __9__ $=$ __389__

Can the forklift safely lift all 3 containers? __yes__

How do you know?

__Because   389 < 400__

$$
\begin{array}{r}
②\ \boxed{1}\ 2 \\
①\ \boxed{2}\ 3 \\
+\ ⓪\ \boxed{5}\ 4 \\
\hline
3\ 0\ 0 \\
8\ 0 \\
+\quad 9 \\
\hline
3\ 8\ 9
\end{array}
$$

Reflecting

How could you have predicted whether the forklift could safely lift all 3 containers?

__We could use__

__front end__

__estimation__

$$
\begin{array}{r}
300 \\
+\ 80 \\
\hline
380
\end{array}
$$

__and not added the ones__

3.4 Adding from Left to Right Page 1

Student Book pages 74–76

GOAL

Solve addition problems by adding from left to right.

Checking

1. A forklift can lift 8000 kg safely.

   The operator needs to lift 3 containers.

   - Container 1 has a mass of 2455 kg.
   - Container 2 has a mass of 849 kg.
   - Container 3 has a mass of 4567 kg.

   Can the 3 containers be lifted safely?

Step 1: Write the masses in the place value chart.

This Step has been done for you.

Mass		Thousands	Hundreds	Tens	Ones
2455		2	4	5	5
849		0	8	4	9
4567	+	4	5	6	7
		6	0	0	0
		1	7	0	0
			1	5	0
	+			2	1
		7	8	7	1

add thousands
add hundreds
add tens
add ones →
add altogether

Th.
Hund
tens
ones

Step 2: Add from left to right. Write the totals in the table.

The thousands have been done for you.

7871 < 8000

3.4 Adding from Left to Right Page 2

a) Can the forklift lift all 3 containers? _yes_

How do you know?

When we added an exact amount
it was 7871 Kg which is less than 8000.

b) Did you estimate to solve the problem or did you calculate an exact answer?

Yes, but our estimate was too high
using front end rounding.

Explain.

When we added the exact, it
was more accurate

Practising

6. Add from left to right.

a)

1877

	1	2	5	9
+	0	6	1	8
		0	0	0
		8	0	0
			6	0
+			1	7
	1	8	7	7

add the thousands
add the hundreds
tens
add the ones
add all together

b)

	6	9	6	3
+	2	3	6	4
	8	0	0	0
	1	2	0	0
		1	2	0
+				7
	9	3	2	7

add the thousands
add the hundreds
add the tens
add the ones
add altogether

grade.4

Chapter 3
Lesson 4

Adding from Left to Right

GOAL

Solve addition problems by adding from left to right.

1. Add from left to right. Show your work.

a)

	1	3	1	1
+	0	6	4	5
	1	0	0	0
		9	0	0
			5	0
+				6
	1	9	5	6

d)

	5	0	6	7
+	3	6	2	1
	8	0	0	0
		6	0	0
			8	0
+				8
	8	6	8	8

b)

	2	4	1	5
+	3	2	2	1
	5	0	0	0
		6	0	0
			3	0
+				6
	5	6	3	6

e)

	4	1	1	1
+	1	7	0	3
	5	0	0	0
		8	0	0
			1	0
+				4
	5	8	1	4

c)

	6	2	2	4
+	1	7	6	8
	7	0	0	0
		9	0	0
			8	0
+			1	2
	7	9	9	2

f)

	1	1	4	3
+		2	5	1
		4	0	2
	1	0	0	0
		7	0	0
			9	0
+				6
	1	7	9	6

At-Home Help

Follow these steps to add from left to right.

Step 1 Add the thousands.

Step 2 Add the hundreds.

Step 3 Add the tens.

Step 4 Add the ones.

Step 5 Add them all together to calculate the sum.

For example:

```
    1 2 4 6
  + 2 9 3 4
    3 0 0 0   (thousands)
    1 1 0 0   (hundreds)
        7 0   (tens)
  +     1 0   (ones)
    4 1 8 0
```

Scaffolding for Lesson 4, Questions 3 & 6   Page 2

STUDENT BOOK PAGE 76

6. Calculate. Show your work.
   Some of the steps are done for you.

a)

```
      1  2  5  9
   +     6  1  8
      1  0  0  0
         8  0  0
            6  0
   +        1  7
      1  8  7  7
```

c)

```
      4  2  1  1
         3  4  5
   +     9  6  7
      4  0  0  0
      1  4  0  0
         1  1  0
   +        1  3
      5  5  2  3
```

b)

```
      6  9  6  3
   +  2  3  6  4
      8  0  0  0
      1  2  0  0
         1  2  0
   +           7
      9  3  2  7
```

d)

```
      1  5  6  7
      1  5  7  8
   +  2  5  6  7
      4  0  0  0
      1  5  0  0
         1  9  0
   +     +1  2  2
      5  7  1  2
```
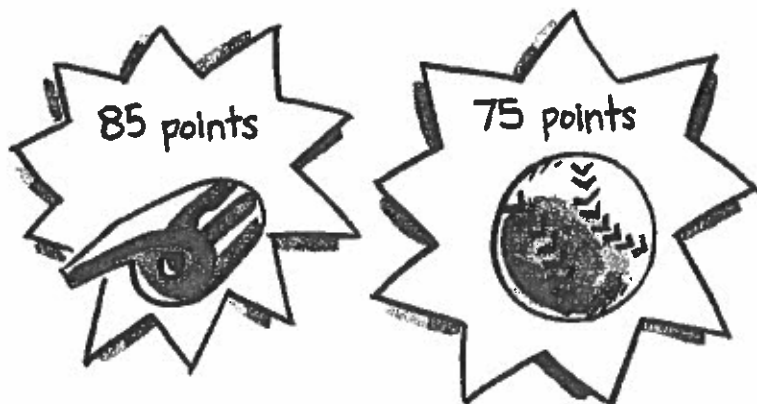
3.5 Adding From Right to Left Page 1

Student Book pages 78–80

GOAL

Solve addition problems by adding from right to left.

You will need
- base ten blocks
- a place value chart

Problem

Aneela's school collects food labels to get points.
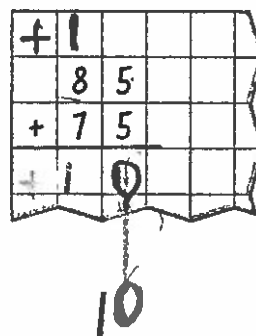
They can trade the points for school equipment.

85 points

75 points

How many points does Aneela's school need for the whistle and baseball?

Use base ten blocks.

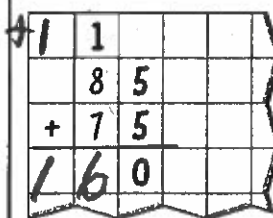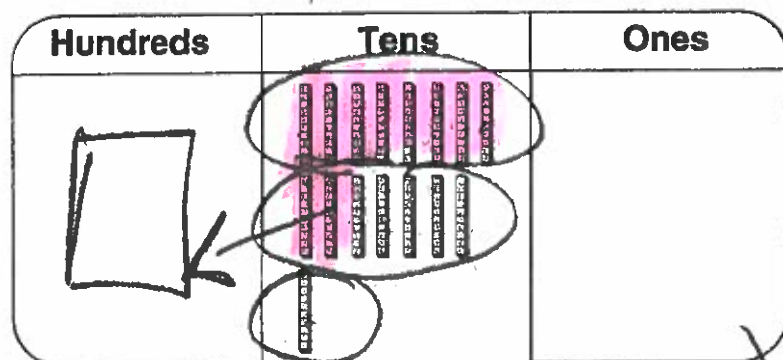**Step 1:** Model the numbers with base ten blocks.

Hundreds	Tens	Ones

$$\begin{array}{r} +\ 1 \\ 8\ 5 \\ +\ 7\ 5 \\ \hline 1\ 0 \end{array}$$

10

Step 2: Add the ones.

__5__ + __5__ = __10__

3.5 Adding From Right to Left Page 2

Step 3: Regroup the ones. Add a ten.

Hundreds	Tens	Ones

regroup
Trade 10 smaller units for 1 larger unit, or 1 larger unit for 10 smaller units
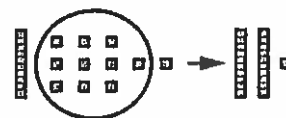
Step 4: Add the tens.

$$\underline{80} + \underline{70} + \underline{10} = \underline{160}$$

Step 5: Regroup the tens. Add a hundred.

Hundreds	Tens	Ones
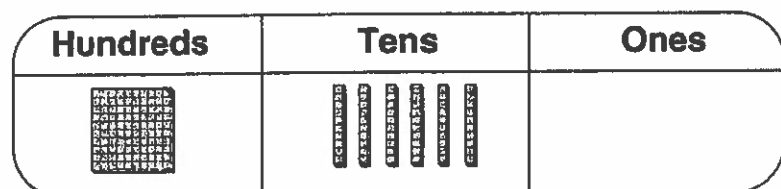
Step 6: Add the blocks.

$$\underline{100} + \underline{60} + \underline{0} = \underline{160}$$

Aneela's school needs __160__ points.

Reflecting

How do you know when to regroup when you are adding from right to left?
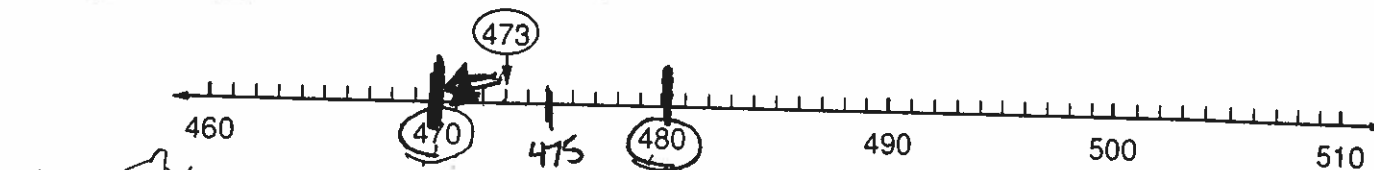
Ones → We regrouped when there was more than 10.
Tens → We regrouped when there was more than ten-tens

Rounding Numbers

Name _____

Round 473 to the nearest 10.

```
          (473)
   ←───┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──→
   460          470   475   480      490      500      510
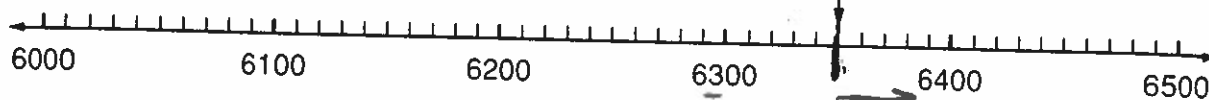```

Think: the closest multiples of 10 are 470 and 480.

473 is closer to 470.

473 rounded to the nearest 10 is 470.

---

**Use the number lines to complete the sentences.**

**Round 6350 to the nearest 100.**

1.

> When a number is halfway between 2 multiples, round up.

```
                                    (6350)
   ←─┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──→
   6000    6100    6200    6300    6400    6500
```

Think: the closest multiples of 100 are 6300 and 6400

6350 is halfway between 6300 and 6400

6350 rounded to the nearest 100 is 6400

```
←─────────── round down
0 1 2 3 4
5 6 7 8 9 ──→ round up
```

Round 87 692 to the nearest 1000.
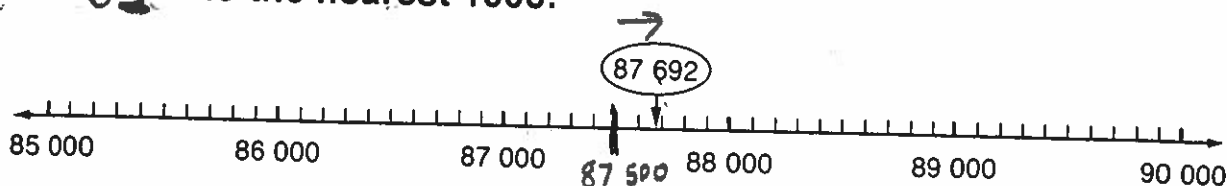
2.

```
                      (87 692)
   ←─┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──→
   85 000   86 000   87 000  87 500  88 000   89 000   90 000
```

Think: the closest multiples of 1000 are 87 000 and 88 000

87 692 is closer to 88 000

87 692 rounded to the nearest 1000 is 8000

Round the numbers. Use the number lines above if you wish.

3. 497 to the nearest 10 **500**

4. 6420 to the nearest 100 **6 400**

5. 6180 to the nearest 100 **6 200**

6. 89 500 to the nearest 1000 **90 000**

Multiples of 10, 100, and 1000

Count by 10. Write the multiples of 10 between 20 and 130.

> A multiple of 10 is a number whose last digit is 0.

20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, *130, 140, 150*

Complete.

1. Count by 100. Write the multiples of 100 between 600 and 1500.

> A multiple of 100 is a number whose last 2 digits are 0.

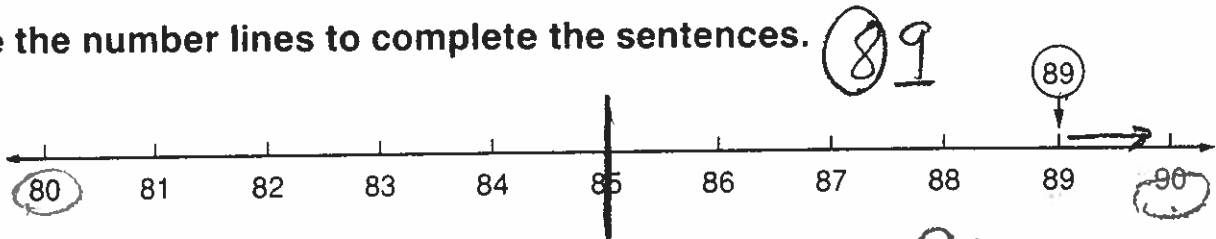700, 800, 900, *1000, 1100, 1200,* 1300, *1400, 1500*

2. Count by 1000. Write the multiples of 1000 between 53 000 and 59 000.

> A multiple of 1000 is a number whose last 3 digits are 0.

54 000, *55 000,* 56 000, *57 000, 58 000, 59 000*

Use the number lines to complete the sentences.

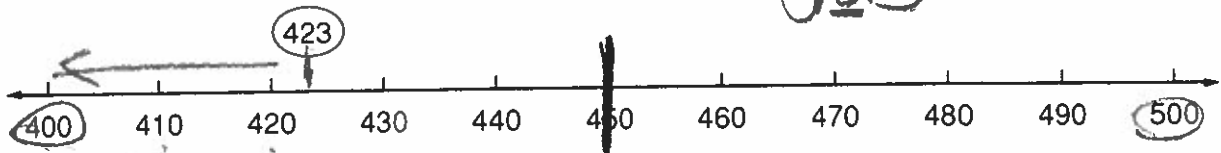3.

The multiples of 10 on the number line are *80* and *90*.
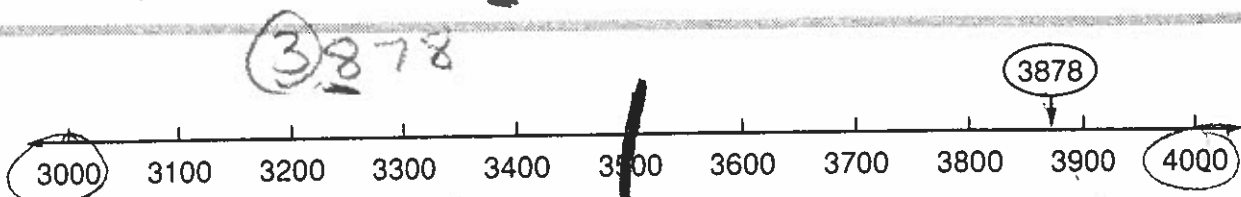
The multiple of 10 closer to 89 is *90*.

4.

The multiples of 100 on the number line are *400* and *500*.

The multiple of 100 closer to 423 is *400*.

5.

The multiples of 1000 on the number line are *3000* and *4 000*.

The multiple of 1000 closer to 3878 is *4000*.

Name: _____ Date: _____

Adding from Right to Left

GOAL

Solve addition problems by adding from right to left.

1. Add from right to left. Show your work.

a)

	1	2	2	5
+		4	3	1
	1	6	5	6

c)

	4	0	7	2
+	3	7	2	4
	7	7	9	6

b)

	+1	+1		
	1	7	6	0
+	1	2	4	8
	3	0	0	8

d)

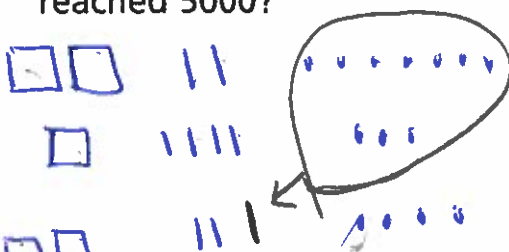|	+1		+1	
	8	6	4	3
+		6	4	8
	9	2	9	1

2. Jade's mother saved $3966 this year. Next year, she plans to save $2992. Will she have enough money to buy a car that costs $7000?

She is No short

$$\begin{array}{r} \overset{+1}{3}\overset{+1}{9}66 \\ + 2992 \\ \hline \$6958 \end{array}$$

3. In September, Joshua's website had 227 visits. In October, it had 2143 visits. In November, it had 2324 visits. Has the number of visitors reached 5000?

$$\begin{array}{r} \overset{+1}{2}27 \\ 2143 \\ + 2324 \\ \hline 4694 \end{array}$$

no only $4 694.

4 6 9 4

At-Home Help

You can **regroup** by trading 10 smaller units for 1 larger unit, or 1 larger unit for 10 smaller units. Follow these steps to add from right to left.

Step 1 Add the ones. If the answer is 10 or more, regroup.

Step 2 Add the tens. If the answer is 100 or more, regroup.

Step 3 Add the hundreds. If the answer is 1000 or more, regroup.

Step 4 Add the thousands. For example:

$$\begin{array}{r} \overset{1}{}\overset{1}{} \\ 3762 \\ + 1942 \\ \hline 5704 \end{array}$$

Adding 4-Digit Numbers

answer key!

Goal Solve addition problems using regrouping.

1. Complete the addition by writing in the spaces in the place value chart.

You can add two 4-digit numbers by **regrouping**.

2539 + 1866

a)

Thousands	Hundreds	Tens	Ones
+1	+1	+1	
2	7	3	2
2	8	6	9
5	6	0	1

b)

Thousands	Hundreds	Tens	Ones
+1		+1	
2	7	3	8
6	4	3	9
9	1	7	7

Thousands	Hundreds	Tens	Ones
1	1	1	
2	5	3	9
1	8	6	6
4	4	0	5

```
 111
 2539
+1866
 4405
```

The answer seems reasonable because 3000 + 2000 = 5000 and the answer is close to 5000.

2. Estimate the sum. Then add.

a)
```
  1 111
  3988      4000
+ 2246    +2000
  6234     6000
```

b)
```
  1  1 1
  3254      3000
+  862    + 900
  4116     3900
```

c)
```
  1
  4310      4000
+ 3859    + 4000
  8169     8000
```

3. Estimate. Then solve.

a) There are 3456 Girl Guides in one area and 1672 in another area. What is the total number of Girl Guides in both areas?

5128 at both ~~tables~~ areas

```
3000 + 2000 =
           5000
 1 1
 3456
+1672
 5128
```

b) There are 1867 Wolf Cubs in one area and 4306 in another area. What is the total number of Wolf Cubs in both areas?

2000 + 4000 = 6000

```
 1  1
 1867
+4306
 6173
```

6173 at both Wolf Cubs.

Addition and Subtraction   33