

Lesson 104

subtracting across zeros

lesson preparation

materials

demonstration money (hundreds, tens, ones)

Master 3-104

eight 3" × 5" cards

eight pieces of construction paper

Fact Sheet M 18.2

the night before

- Write the following amounts on 3" × 5" cards:

\$600	\$680	\$805	\$730
\$610	\$700	\$520	\$900

- Write the names of items that are attractive to the children (and paste a picture of the item, if possible) on construction paper along with one of the following amounts:

\$125	\$363	\$240	\$68
\$457	\$308	\$189	\$295

in the morning

- Have children complete Master 3-R1.
- Write the following number pattern on a paper strip and post it on the bulletin board:

150, ____, 160, ____, 170, ____, 180, ____, 190, ____, 200, ____, 210	Rule: _____
---	-------------

Answer: 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210 Rule: + 5

- Set the demonstration clock at **9:15**.
- Write the following problem in the space labeled "Problem of the Day":

John does ten pushups each night. How many pushups will he do this year?
--

Answer: $365 \times 10 \text{ pushups} = 3,650 \text{ pushups}$

- Allow time for today's Student of the Day to fill in the date tag, write the date, write three number sentences for the number of the day, and read and record the temperature.
- The Student of the Day writes any money amount up to 75¢ on the tag, puts coins equal to that amount in the coin cup, and identifies the number of coins used.
- Collect homework from the previous day. Correct and review errors with the children individually.

THE MEETING

calendar

- Ask the Student of the Day to state today's date using a complete sentence.
- Ask all of the children to identify the following. (Ask the items preceded by an asterisk [*] once or twice a week.)
 - * number of days in 1 to 10, 100, 1000 weeks (ask in random order)
 - * date ____ days ago, ____ days from now, week ago, week from now
 - * number of months in 1–10 years, 100 years, 1000 years
 - * month before _____, month after _____, ____th month of the year
 - number of weeks given ____ days
 - number of days in (month)
 - * number of days in a year, number of days in a leap year

number of the day

- Ask the Student of the Day to do the following:
 - read the three number sentences
 - record other children's number sentences

temperature

- Ask all children to estimate today's temperature using the Celsius scale.
- Discuss the shading of the thermometer.
- Ask the children to compare today's temperature with yesterday's temperature.
- Ask the children to identify the Celsius and Fahrenheit temperatures at which water freezes and water boils.

today's count

- The Student of the Day leads the counting.
- Count by $\frac{1}{4}$'s to 4 and backward from 4 by $\frac{1}{4}$'s.
- Count by $\frac{1}{2}$'s to 6 and backward from 6 by $\frac{1}{2}$'s.
- Count by 9's to 90 and backward from 90 by 9's.
- Count by 6's to 60 and backward from 60 by 6's.
- Count by 3's to 30 and backward from 30 by 3's.
- Do each of the following once or twice a week:
 - count by 100's to 3000 and backward from 3000 by 100's
 - count by 10's (begin and end at numbers such as 480 and 620)
 - count by 5's to 100 and backward from 50 by 5's
 - count by 2's from 100 to 150 and backward from 150 to 100 by 2's
 - count by odd numbers from 101 to 149 and backward from 149 to 101
 - count by 7's to 70 and backward from 70 by 7's
 - count by 25's to 500 and backward from 500 by 25's
 - count by 4's to 40 and backward from 40 by 4's
 - count by 8's to 80 and backward from 80 by 8's

count by 12's to 120 and backward from 120 by 12's

perfect squares to 100

clap and snap count is led by the Student of the Day

Student of the Day chooses a number between 1 and 9 and the children count by 10's to 200. For example: 2, 12, 22, . . . , 182, 192.

today's pattern

- Ask all of the children to do the following as the Student of the Day records:
 - identify the numbers to complete the pattern
 - identify the rule of the pattern
 - read the pattern together

clock

- Ask the Student of the Day the following:
 - “It's afternoon. What time is shown on the clock?”***
 - “What is another way to say this time?”***
 - “Write the digital time.”***
- Ask all of the children the following:
 - number of minutes until the next hour
 - time two hours ago
 - time one half hour from now
 - number of minutes in one hour and one half hour
- Ask the Student of the Day to do the following:
 - “Show the time one half hour from now.”***

problem of the day

- The Student of the Day reads today's problem.
- Ask all of the children to answer the question.
- The Student of the Day writes the answer below the problem.

coin cup

- Ask the children to identify the coins in the coin cup.
- Check each suggestion with the children.
- The Student of the Day holds up each coin as the children count the money together.

THE LESSON

Subtracting Across Zeros

“Today you will learn how to subtract across zeros.”

“Let's begin with \$600.”

“We will use only hundred-, ten-, and one-dollar bills.”

“How will we show \$600 using the fewest bills?” *six hundred-dollar bills*

- Draw 3 columns on the chalkboard and label them as follows:

hundreds tens ones
\$

“Who would like to write \$600 on my chart?”

- Ask a child to record the amount on the chalkboard chart.

“We will give _____ \$274.”

“Let’s find out how much money we will have left.”

“What kind of problem is this?” *some, some went away*

- Record “-274” on the chalkboard below the 600.

“We will need to take \$274 out of the \$600.”

“Let’s begin with the dollars.”

“We need to give _____ four dollars.”

“Do we have four dollars to give away?” *no*

- Hold up the 6 hundred-dollar bills for the children to see.

“What can we do?”

“We could trade 1 hundred-dollar bill for 100 one-dollar bills, but we would have too many one-dollar bills left over.”

“Instead, we will trade a hundred-dollar bill for ten ten-dollar bills.”

- Do this with the money.

“How many hundred-dollar bills do we have now?” *5*

“How many ten-dollar bills do we have now?” *10*

“How will we show that on our example?”

- Record the following on the chalkboard:

$$\begin{array}{r} 5 \\ \$ \cancel{6}00 \\ - 274 \\ \hline \end{array}$$

“Do we have enough one-dollar bills that we can give away four?” *no*

“What can we do?” *trade a ten for ten ones*

“Now we can trade one ten-dollar bill for ten one-dollar bills.”

- Do this with the money.

“How many ten-dollar bills do we have now?” *9*

“How many one-dollar bills do we have now?” *10*

“How will we show that on our example?”

- Record the following on the chalkboard:

$$\begin{array}{r} 5 \ 9 \\ \$ \cancel{6}00 \\ - 274 \\ \hline \end{array}$$

“Do we have enough one-dollar bills that we can give away four?” **yes**

“How many one-dollar bills will we have left?” **6**

“Do we have enough ten-dollar bills that we can give away seven?” **yes**

“How many ten-dollar bills will we have left?” **2**

“Do we have enough hundred-dollar bills that we can give two away?” **yes**

“How many hundred-dollar bills will we have left?” **3**

- Record the answer on the chalkboard.

“How much money will we have left?” **\$326**

“Let’s check this by using the money.”

“I will give _____ \$274.”

- Remove 2 hundred-, 7 ten-, and 4 one-dollar bills.

“Let’s count how much money we have left.”

- Count the money with the children.

“We also can check our answer by adding.”

“We will add the amount we have left and the amount we gave away to see if it is the same as the amount of money we had at the beginning.”

“How much money did we have left?” **\$326**

“How much money did we give away?” **\$274**

- Ask a child to show the addition on the chalkboard.

“How much money did we have at the beginning of the story?” **\$600**

“Are we correct?”

“Now we will put the money back and start over.”

“This time we will begin with \$502.”

- Record the following on the chalkboard:

	hundreds	tens	ones
\$	5	0	2

“What bills should we use?” **five hundreds, two ones**

“This time we will give _____ \$183.”

- Record “-183” on the chalkboard chart.

“Where will we start?” **with the dollars**

“How many one-dollar bills do we have?” **2**

“We need to give _____ three one-dollar bills.”

“Do we have enough one-dollar bills to give away three?” **no**

“What can we do?” **trade a ten for ten ones**

“Do we have any ten-dollar bills we can trade?” **no**

- Hold up the 5 hundred-dollar bills for the children to see.

“We could trade 1 hundred-dollar bill for 100 one-dollar bills, but we would have too many ones left over.”

“Instead, we will trade a hundred-dollar bill for ten ten-dollar bills.”

- Do this with the money.

“How many hundred-dollar bills do we have now?” 4

“How many ten-dollar bills do we have now?” 10

“How will we show this on our example?”

- Record the following on the chalkboard:

$$\begin{array}{r} 4 \\ \$ \cancel{5}^{10} 2 \\ - 183 \\ \hline \end{array}$$

“Do we have enough one-dollar bills that we can give away three?” no

“What can we do?” trade a ten for ten ones

“Now we can trade one ten-dollar bill for ten one-dollar bills.”

- Do this with the money.

“How many ten-dollar bills do we have now?” 9

“How many one-dollar bills do we have now?” 12

“How will we show this on our example?”

- Record the following on the chalkboard:

$$\begin{array}{r} 4 \quad 9 \\ \$ \cancel{5}^{10} 2 \\ - 183 \\ \hline \end{array}$$

“Do we have enough one-dollar bills that we can give away three?” yes

“How many one-dollar bills will we have left?” 9

“Do we have enough ten-dollar bills that we can give away eight?” yes

“How many ten-dollar bills will we have left?” 1

“Do we have enough hundred-dollar bills that we can give away one?” yes

“How many hundred-dollar bills will we have left?” 3

- Record the answer on the chalkboard.

“How much money do we have left?” \$319

“Let’s check this by using the money.”

“I will give _____ \$183.”

- Remove 1 hundred-, 8 ten-, and 3 one-dollar bills.

“Let’s count how much money we have left.”

- Count the money with the children.

“We also can check our answer by adding.”

“How can we do that?” **add the amount of money given away and the amount left**

“What will we add?” **\$183 + \$319**

“What should be our answer when we add?” **\$502**

- Ask a student to show the addition on the chalkboard.

“Are we correct?”

“Today we are going to play a game called Prizes or Cash.”

“This is how our game is played.”

“These are the prizes and the cost of each prize.”

- Display the pictures of the six prizes.

“First I will draw a card from this pile.”

“This will be the amount of money you have to spend.”

“We will begin with a different amount of money each time.”

- Show children an amount written on a 3" × 5" card.

“One child will choose a prize.”

“Everyone will have a chance to win that prize.”

“In order to win the prize, you must tell me how much money you will have left after you pay for the prize.”

“If you find the correct amount of money left, you will win the prize.”

“At the end of the game we will pretend that you can keep your prizes or you can keep \$75 for each prize that you won.”

- Pass out **Master 3-104** to each child.
- Play the game at least four times. Make additional copies of the recording form for additional practice, if desired.

CLASS PRACTICE

- Pass out **Fact Sheet M 18.2**.
- Time the children for exactly 45 seconds.
- Ask a different child to read the answers for each row.
- Collect the fact sheets for recording. Return collected sheets to the children.
- Allow children to take the completed fact sheets home. Encourage children who are having difficulty to practice the facts at home.

WRITTEN PRACTICE

- Distribute **Worksheet 104A/104B**.
- Read and review each problem with the children.
- Assist the children as they work.
- Correct Side A with the children.

Name _____ **MASTER 3-104**
Math 3

Prize 1 _____

Money to spend _____

Cost of Prize #1 _____

Money left over _____

Were you right?
Did you win the prize?
Yes No

Prize 2 _____

Money to spend _____

Cost of Prize #2 _____

Money left over _____

Were you right?
Did you win the prize?
Yes No

Prize 3 _____

Money to spend _____

Cost of Prize #3 _____

Money left over _____

Were you right?
Did you win the prize?
Yes No

Prize 4 _____

Money to spend _____

Cost of Prize #4 _____

Money left over _____

Were you right?
Did you win the prize?
Yes No

Do you want the: _____ What is the total value of the prizes you won?

Prizes? _____

Money? _____

(\$75 for each prize) Total

3-104Ma Copyright © 1991 by Saxon Publishers, Inc. and Nancy Larson. Reproduction prohibited.

Name _____ **LESSON 104A**
Math 3

Date _____


(Draw a $4\frac{3}{4}$ " line segment.)

(Draw a 9 cm line segment.)

1. Jason does ten situps each night. How many situps will he do during the month of March?
Number sentence $10 \times 31 = 310$ situps Answer **310 situps**

2. Show 4 ways to make 80c. **answers may vary** What coins would you use to make 80c using the fewest number of coins? Draw the coins.

Q	D	N	P	Total Coins



3. Find the answers. Check each answer by adding.

\$9 0 3	\$6 0 0
- 7 2 9	- 1 5 8
\$1 7 4	\$4 4 2

\$5 4 0	\$3 1 7
- 4 1 7	- 3 1 7
\$2 8 7	\$2 2 3

4. There are eight people in line. You are third.
How many people are before you? 2 What fractional part is that? $\frac{2}{8}$ or $\frac{1}{4}$
Each person takes a half hour.
How long will you have to wait for your turn? 1 hour

5. Write \$51,240.16 as you would on a check.
fifty-one thousand, two hundred forty and $\frac{16}{100}$ DOLLARS

6. Use the correct comparison symbol (>, <, or =).

$62 \times 1000 > 584 \times 100$ $\sqrt{64} + \sqrt{49} = 50 \div 10$

$\$2649.37 + \$3457.48 > \$4226.93 + \1877.08

3-104Ma Copyright © 1991 by Saxon Publishers, Inc. and Nancy Larson. Reproduction prohibited.


Name _____ **LESSON 104B**
Math 3

Date _____

1. Each evening Michelle reads 10 pages of a book. How many pages will she read during the month of April?
Number sentence $30 \times 10 = 300$ pages Answer **300 pages**

2. Show 4 ways to make 90c. **answers may vary** What coins would you use to make 90c using the fewest number of coins? Draw the coins.

Q	D	N	P	Total Coins



3. Find the answers. Check each answer by adding.

\$7 0 4	\$5 0 0
- 4 1 7	- 2 3 7
\$2 8 7	\$2 6 3

\$6 7 0	\$1 4 6
- 3 1 7	- 1 4 6
\$5 2 4	\$5 2 4

4. There are eight people in line. You are fourth.
How many people are before you? 3 What fractional part is that? $\frac{3}{8}$
Each person takes a half hour.
How long will you have to wait for your turn? 1½ hours

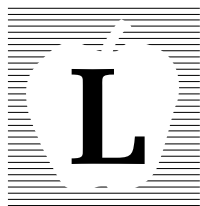
5. Write \$70,309.27 as you would on a check.
seventy thousand, three hundred nine and $\frac{27}{100}$ DOLLARS

6. Use the correct comparison symbol (>, <, or =).

$165 \times 100 < 17 \times 1000$ $\sqrt{81} - \sqrt{16} = 8 \times 3 - 20$

$\$29,517.38 + \$13,438.54 < \$31,587.20 + \$12,614.35$

3-104Mb Copyright © 1991 by Saxon Publishers, Inc. and Nancy Larson. Reproduction prohibited.



Lesson 105

multiplying by nine

lesson preparation

materials

Written Assessment #20

individual clocks

demonstration clock

Fact Sheet M 19.0

in the morning

- Have children complete Master 3-R1.
- Write the following number pattern on a paper strip and post it on the bulletin board:

$\frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}, \frac{5}{4}, \frac{6}{4}, \frac{7}{4}$	$\longrightarrow, \longrightarrow, \longrightarrow, \longrightarrow, \longrightarrow, \longrightarrow$	Rule: _____
---	--	-------------

Answer: $\frac{1}{4}, \frac{2}{4}, \frac{3}{4}, \frac{4}{4}, \frac{5}{4}, \frac{6}{4}, \frac{7}{4}, \frac{8}{4}, \frac{9}{4}, \frac{10}{4}, \frac{11}{4}, \frac{12}{4}, \frac{13}{4}$ *Rule:* $+ \frac{1}{4}$

- Set the demonstration clock at **6:45**.
- Write the following problem in the space labeled "Problem of the Day":

Bob drinks four glasses of milk and two glasses of water each day. How many glasses of liquid will he drink in one week?

Answer: 7×6 glasses of liquid = 42 glasses of liquid

- Allow time for today's Student of the Day to fill in the date tag, write the date, write three number sentences for the number of the day, and read and record the temperature.
- The Student of the Day writes any money amount up to \$1.00 on the tag, puts coins equal to that amount in the coin cup, and identifies the number of coins used.
- Collect homework from the previous day. Correct and review errors with the children individually.

THE MEETING

calendar

- Ask the Student of the Day to state today's date using a complete sentence.
- Ask all of the children to identify the following once or twice a week:

number of days in 1 to 10, 100, 1000 weeks (ask in random order)