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# Math 206

## Lesson 1

(pages 1-6)

### Lesson Preparation

- LightUnit 206 for each student
- *I AND M FLASH CARDS*

### New Skills / Concepts

- Understand the concept of multiplication
- Focus on facts for 6, 8, and 14

### Oral Activities

➔ **Introduction.** LightUnit 206 has something new. Read and discuss “To the Student” on the page after the contents page.

Read and discuss page 1 together. Ask students what they like about winter. Leaf through the LightUnit together, pointing out new things they will be learning. Be enthusiastic.

➔ **Title Bar.** Point out that December is the last month of the year and January is the first. February is the shortest month of the year.

➔ **Counting.** Count forward and backward by 2’s to 24.


➔ ***I AND M FLASH CARDS* and Speed Drill 1.** Teach students how to color the right number of rectangles on the graph on page 78 to record their daily scores.

### Teaching the Lesson

➔ **Multiplication.** Draw five groups of four stars on the chalkboard. Tell students that we can multiply to find how many when the groups are of equal size. We can find the answer to multiplication by skip counting. If we have five groups of four stars, we count by 4’s and get a total of 20.  $5 \times 4 = 20$ . Point out the *times* symbol and tell students that it means to multiply. Do several more examples together, using circles or triangles.

➔ **Fact Focus.** Focus on facts for 6, 8, and 14. Write the related facts on the chalkboard. Review them together.

➔ **We Remember**

 **Speed Drill 1** Number correct in 2 minutes:

$\begin{array}{r} 9 \\ -5 \\ \hline 4 \end{array}$	$\begin{array}{r} 10 \\ -6 \\ \hline 4 \end{array}$	$\begin{array}{r} 10 \\ -3 \\ \hline 7 \end{array}$	$\begin{array}{r} 11 \\ -8 \\ \hline 3 \end{array}$	$\begin{array}{r} 12 \\ -9 \\ \hline 3 \end{array}$	$\begin{array}{r} 10 \\ -4 \\ \hline 6 \end{array}$	$\begin{array}{r} 16 \\ -7 \\ \hline 9 \end{array}$	$\begin{array}{r} 5 \\ -0 \\ \hline 5 \end{array}$
$\begin{array}{r} 11 \\ -4 \\ \hline 7 \end{array}$	$\begin{array}{r} 15 \\ -9 \\ \hline 6 \end{array}$	$\begin{array}{r} 5 \\ -5 \\ \hline 0 \end{array}$	$\begin{array}{r} 11 \\ -7 \\ \hline 4 \end{array}$	$\begin{array}{r} 13 \\ -9 \\ \hline 4 \end{array}$	$\begin{array}{r} 7 \\ -1 \\ \hline 6 \end{array}$	$\begin{array}{r} 11 \\ -3 \\ \hline 8 \end{array}$	$\begin{array}{r} 17 \\ -8 \\ \hline 9 \end{array}$
$\begin{array}{r} 11 \\ -2 \\ \hline 9 \end{array}$	$\begin{array}{r} 11 \\ -5 \\ \hline 6 \end{array}$	$\begin{array}{r} 5 \\ -3 \\ \hline 2 \end{array}$	$\begin{array}{r} 11 \\ -9 \\ \hline 2 \end{array}$	$\begin{array}{r} 13 \\ -4 \\ \hline 9 \end{array}$	$\begin{array}{r} 7 \\ -7 \\ \hline 0 \end{array}$	$\begin{array}{r} 11 \\ -6 \\ \hline 5 \end{array}$	$\begin{array}{r} 18 \\ -9 \\ \hline 9 \end{array}$
$\begin{array}{r} 14 \\ -7 \\ \hline 7 \end{array}$	$\begin{array}{r} 14 \\ -9 \\ \hline 5 \end{array}$	$\begin{array}{r} 16 \\ -9 \\ \hline 7 \end{array}$	$\begin{array}{r} 16 \\ -8 \\ \hline 8 \end{array}$	$\begin{array}{r} 12 \\ -3 \\ \hline 9 \end{array}$	$\begin{array}{r} 14 \\ -5 \\ \hline 9 \end{array}$	$\begin{array}{r} 15 \\ -6 \\ \hline 9 \end{array}$	$\begin{array}{r} 17 \\ -9 \\ \hline 8 \end{array}$

**Winter**

“What do you like best about winter?” Miss Mary asked her second grade class.

“I like making snowmen and going sledding,” said James.

“Our family goes skating together on the pond when it freezes,” added Joyce.

“I really enjoy feeding the birds,” said Mark. “I keep a record of the different kinds that come to our feeder. God has made lots of different birds, but my favorite is the cardinal.”

Sarah giggled. “I like to stay home from school on snowy days. Sometimes we get to go visit Grandma and Grandpa then.”

Michael raised his hand. “Yes, Michael,” said Miss Mary.

“We live near the woods. It is fun to go into the woods after a new snowfall and look for animal tracks in the snow. Last year I tracked a wildcat close to our place,” said Michael.

“Oh, that sounds scary to me,” said Janell.

“What do you like about winter, Miss Mary?” asked James.

“I like looking at the snowflakes,” answered Miss Mary. “Did you know they are all different? It reminds me that God also made people different from each other. No two people are exactly alike. And you are all special to God and to me.”

“Now let’s open these winter LightUnits and have fun working in them,” finished Miss Mary.

1

1

Our winter months are December, January, and February.



□ Count forward and backward by 2's to 24.



□ Practice your I and M flash cards for 5 minutes.

□ Do Speed Drill 1 on page 79.



□ Record your score in the graph on page 78.

**Multiplication**

We can multiply (mə'l•tə•plī) groups of equal size.

Solve multiplication (mə'l•tə•plə•kā'shən) by counting groups. We call this *skip counting*.

three groups of bananas  
five bananas in each group

Count	5	10	15
			fifteen bananas in all

2

**Lesson 1**

$$\begin{array}{r} \underline{3} \text{ groups of } \underline{5} \text{ equal } \underline{15} \\ \underline{3 \times 5 = 15} \end{array}$$

This is a multiplication sentence.

Say: *Three times five equals fifteen.*

The *times symbol* (×) in the multiplication sentence means we have groups of 5 bananas 3 times.

Write a multiplication sentence. Count by groups to solve.

The first one shows you how.

1.  $\underline{2}$  groups of  $\underline{3}$  equal  $\underline{6}$

$$\underline{2 \times 3 = 6}$$

2.  $\underline{2}$  groups of  $\underline{5}$  equal  $\underline{10}$

$$\underline{2 \times 5 = 10}$$

Order of factors may vary.

3.  $\underline{5}$  groups of  $\underline{5}$  equal  $\underline{25}$

$$\underline{5 \times 5 = 25}$$

3

**Lesson 1**

Match  
1

Write, recite, and learn the four related facts.

4. Order of facts may vary.



Write the missing numbers for the facts.

5. $\begin{array}{r} 6 \\ + 8 \\ \hline 14 \end{array}$	$\begin{array}{r} 14 \\ - 8 \\ \hline 6 \end{array}$	$\begin{array}{r} 13 \\ - 8 \\ \hline 5 \end{array}$	$\begin{array}{r} 8 \\ + 5 \\ \hline 13 \end{array}$	$\begin{array}{r} 7 \\ + 6 \\ \hline 13 \end{array}$	$\begin{array}{r} 14 \\ - 6 \\ \hline 8 \end{array}$	$\begin{array}{r} 5 \\ + 8 \\ \hline 13 \end{array}$	$\begin{array}{r} 13 \\ - 5 \\ \hline 8 \end{array}$
---	--	--	--	--	--	--	--



6. James shoveled snow three times this winter. The first time there were 8 inches of snow. The next time it was 6 inches deep. The last time 12 inches of snow fell. How many inches of snow fell altogether in the three snowfalls?

26 inches

Solution

$$\begin{array}{r} 8 \\ 6 \\ + 12 \\ \hline 26 \end{array}$$

Find the sums. There are no boxes to show where to carry. Be careful!

7. $\begin{array}{r} 24 \\ + 65 \\ \hline 89 \end{array}$	$\begin{array}{r} 22 \\ + 34 \\ \hline 56 \end{array}$	$\begin{array}{r} 44 \\ + 17 \\ \hline 61 \end{array}$	$\begin{array}{r} 364 \\ + 382 \\ \hline 746 \end{array}$	$\begin{array}{r} 32 \\ + 16 \\ \hline 88 \end{array}$	$\begin{array}{r} 5 \\ + 9 \\ \hline 19 \end{array}$
---	--	--	---	--	--

4

**Lesson 1**

8. $\begin{array}{r} 137 \\ + 253 \\ \hline 390 \end{array}$	$\begin{array}{r} 365 \\ + 380 \\ \hline 745 \end{array}$	$\begin{array}{r} 57 \\ + 35 \\ \hline 92 \end{array}$	$\begin{array}{r} \$1.37 \\ + 4.20 \\ \hline \$5.57 \end{array}$	$\begin{array}{r} \$4.18 \\ - 3.01 \\ \hline \$1.17 \end{array}$
--	---	--	--	--

9.

Make a tally mark for each cardinal.  
Make a tally mark for each junco.

10.

Write the amounts. Use the dollar sign.

11. \$ .64

12. \$ 1.50

5

## Lesson 1

Write the hundreds that come before and after.

13.  $500$  531  $600$        $800$  876  $900$

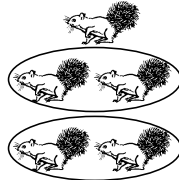
Write the tens the numbers come between.

14.  $70$  71  $80$        $10$  13  $20$

Circle pairs of squirrels.

15. There are 2 pairs.

16. Is 5 an even number or an odd number?

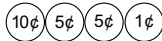
 even     odd

Answer the questions. Draw the coins.

James had two dimes and one penny.  
David had one nickel and seven pennies.17. Which boy had the most coins? James   David18. Which boy had the most money?  James     David

19. Draw other coins to show the same value as James's coins.

Answers may vary.



Fill in the blanks.

20. 1 pint = 2 cups      1 quart = 4 cups

6

## Lesson 2

(pages 7-11)

## Lesson Preparation

- A calendar from last year
- This year's calendar
- *L AND M FLASH CARDS*
- Teaching clock

## New Skills / Concepts

- Count how many minutes have passed from a given time
- Learn the terms *factor* and *product*



## Speed Drill 2

Number correct in 2 minutes: 

$\begin{array}{r} 4 \\ + 3 \\ \hline 7 \end{array}$	$\begin{array}{r} 2 \\ + 6 \\ \hline 8 \end{array}$	$\begin{array}{r} 9 \\ + 6 \\ \hline 15 \end{array}$	$\begin{array}{r} 4 \\ + 0 \\ \hline 4 \end{array}$	$\begin{array}{r} 8 \\ + 8 \\ \hline 16 \end{array}$	$\begin{array}{r} 6 \\ + 4 \\ \hline 10 \end{array}$	$\begin{array}{r} 1 \\ + 2 \\ \hline 3 \end{array}$	$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array}$
$\begin{array}{r} 7 \\ + 7 \\ \hline 14 \end{array}$	$\begin{array}{r} 2 \\ + 5 \\ \hline 7 \end{array}$	$\begin{array}{r} 3 \\ + 5 \\ \hline 8 \end{array}$	$\begin{array}{r} 1 \\ + 3 \\ \hline 4 \end{array}$	$\begin{array}{r} 0 \\ + 7 \\ \hline 7 \end{array}$	$\begin{array}{r} 9 \\ + 7 \\ \hline 16 \end{array}$	$\begin{array}{r} 9 \\ + 9 \\ \hline 18 \end{array}$	$\begin{array}{r} 4 \\ + 9 \\ \hline 13 \end{array}$
$\begin{array}{r} 4 \\ + 2 \\ \hline 6 \end{array}$	$\begin{array}{r} 8 \\ + 1 \\ \hline 9 \end{array}$	$\begin{array}{r} 3 \\ + 2 \\ \hline 5 \end{array}$	$\begin{array}{r} 3 \\ + 7 \\ \hline 10 \end{array}$	$\begin{array}{r} 7 \\ + 2 \\ \hline 9 \end{array}$	$\begin{array}{r} 3 \\ + 9 \\ \hline 12 \end{array}$	$\begin{array}{r} 9 \\ + 8 \\ \hline 17 \end{array}$	$\begin{array}{r} 5 \\ + 4 \\ \hline 9 \end{array}$
$\begin{array}{r} 2 \\ + 9 \\ \hline 11 \end{array}$	$\begin{array}{r} 8 \\ + 3 \\ \hline 11 \end{array}$	$\begin{array}{r} 4 \\ + 4 \\ \hline 8 \end{array}$	$\begin{array}{r} 3 \\ + 6 \\ \hline 9 \end{array}$	$\begin{array}{r} 7 \\ + 4 \\ \hline 11 \end{array}$	$\begin{array}{r} 9 \\ + 5 \\ \hline 14 \end{array}$	$\begin{array}{r} 6 \\ + 6 \\ \hline 12 \end{array}$	$\begin{array}{r} 2 \\ + 8 \\ \hline 10 \end{array}$

79

## Oral Activities

- ➔ **Title Bar.** Look at last year's calendar to see which day winter began last year. Check this year's calendar to see which day winter begins this year.
- ➔ **Counting.** Count forward and backward by 12's to 60 and by 5's to 60.
- ➔ **L AND M FLASH CARDS and Speed Drill 2.** Have students record their scores on the graph on page 78.

## Teaching the Lesson

→ **How Much Time Has Passed?** Do the example on LightUnit page 7 together on the chalkboard. The clock shows the time the van began to wait. Have students place a dot by the number the minute hand was on when the van was able to go again. Count by 5's from the original time to the dot. That is the answer. Do more examples on the board or use the teaching clock.


→ **Factors and Products.** Write a simple addition problem on the chalkboard. Review *addends* and *sum*. Write a horizontal multiplication problem on the board. Point out that the numbers we multiply are *factors*; the answer is the *product*. Use these terms often in your teaching.

→ **We Remember**

## Helpful Hint

Figure how long different activities of the school day take. For example, morning recess begins at 10:00; it ends at 10:15. How long is recess? Devotions begins at 8:30 and ends at 8:45. How long is devotions?

2



Winter begins on  
December 20 or 21.

NEW

**How Much Time Has Passed?**

At 8:00, on the way to school, the van was stopped because of an accident on the snowy roads. At 8:15 the van was able to go again. How long did the van wait?

The clock shows 8:00. The van could not go until 8:15. Think where the minute hand is at 8:15.

Count the minutes from 8:00 to 8:15.

The van waited 15 minutes.


NEW

7

**Lesson 2**

**Use the clock to help you find the answer.**

- "Oh, look, it's snowing, Miss Mary!" exclaimed Mark. "Do you think we'll get to go home early?" "I don't know," answered Miss Mary. "It is only 11:00."  
But at 11:30 the children were getting rides home. How many minutes after it started snowing did the children go home?  
30 minutes



**Factors and Products**

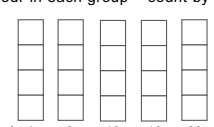
Numbers that are multiplied are factors. The answer is the product.

5 groups of 4 equal 20

5 × 4 = 20  
factor factor product

Count by groups to find the product.

five groups of squares  
four in each group – count by 4's



count: 4   8   12   16   20

twenty squares in all

NEW

NEW

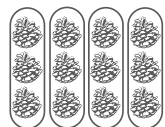

8

**Lesson 2**


**Write multiplication sentences. Circle the factors.**

**Box the products.**

- 4 groups of 3 equal 12  
4 × 3 = 12
- 6 groups of 2 equal 12  
6 × 2 = 12

Order of factors in Numbers 2 and 3 may vary.



**We Remember**

- In the plains of Guatemala, the temperature in January is usually 80 degrees Fahrenheit. In Romania the January temperature is usually 30 degrees. How much colder is it in Romania than in Guatemala during January?  
50 degrees colder

7 8 9

- 5 6 4

---

225

4 3 7

- 1 3

---

424

6 5

- 2 3

---

42

i

4 2 8

+ 3 5 6

---

784

i

6 1 8

+ 1 5

---

633

Solution

80
-30
50

NEW

NEW

9