Lesson 45

subtracting half of a double

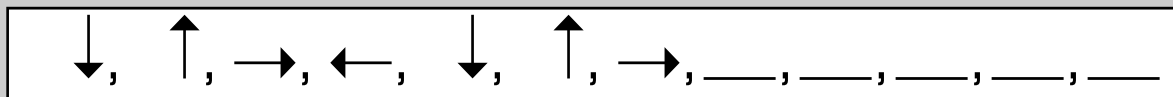### lesson preparation

materials

Written Assessment #8

balance

20 color tiles

Fact Sheet S1.2

in the morning

• Write the following pattern on a paper strip and post it on the bulletin board:

$$\downarrow, \quad \uparrow, \rightarrow, \leftarrow, \quad \downarrow, \quad \uparrow, \rightarrow, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}, \underline{\quad}$$

Answer: $\downarrow, \uparrow, \rightarrow, \leftarrow, \downarrow, \uparrow, \rightarrow, \leftarrow, \downarrow, \uparrow, \rightarrow, \leftarrow$

• Write ⟨ 81¢ ⟩ on the money tag. Provide a cup of 10 dimes and a cup of 20 pennies.

• Allow time prior to The Meeting for the Student of the Day to fill in the date tag, put coins in the coin cup to match the amount on the tag. read the temperature to the nearest ten degrees, and record it on scrap paper. Assist the student of the Day, if necessary.

• Collect homework from the previous day. Correct and review errors with the children individually.

THE MEETING

"Today _____ is Student of the Day."

calendar

• Ask the children to spell the name of the month as the Student of the Day writes the date on the bulletin board date strip.

• Ask all of the children the following:

days of the week, weekdays, days of the weekend

date _____ days ago, date _____ days from now

day of the week _____ days ago, day of the week _____ days from now

months of the year, _____th month, month before, month after

patterning

- Ask all of the children to do the following:

  identify the pattern (repeating or continuing)

  identify the shapes to complete the pattern

  read the pattern together

counting

- Do this 2–3 times a week.

- Counting can be done in various ways. You may want the children to count around the classroom, count as they exercise, or do similar counting activities.

- Count by 10's to 300 and backward from 300 by 10's.

- Count by 5's to 100 and backward from 50 by 5's.

- Say the even numbers to 40 and backward from 40.

- Say the odd numbers to 39 and backward from 39.

weather graph

- The Student of the Day writes the temperature to the nearest ten degrees on the appropriate tag and graphs the tag.

- Ask all children questions about the graph.

money

- Hold up each coin as the children count the amount of money in the coin cup.

- Ask all the children for another way to show that amount of money. Hold up each coin as the children count to check the amount.

clock

- Ask the Student of the Day to set the clock on the half hour or hour.

- The Student of the Day shows the clock to the children and asks the following:

  time shown on the clock

  time one hour ago

  time one hour from now

  how to write the digital time

- The Student of the Day writes the digital time on a tag and posts it on the bulletin board.

lunch/attendance graph

- The Student of the Day gives the attendance and the lunch count report.

- The Student of the Day fills in the information on the bulletin board chart.

graph questions

- The Student of the Day asks 2–3 questions about any of the classroom graphs.

chart story

- Continue the chart story. Include the Student of the Day's birthday, the number of the day, the time for a special activity during the day, and the number of days until a special event or holiday occurs.

THE LESSON

Written Assessment

> *"Today, I would like to see what you remember from what we have been practicing."*

- Pass out **Written Assessment #8**.

- Read the directions for each example. Allow time for all the children to complete that example before continuing.

- When children are finished, collect the papers.

- Correct the papers, noting children's mistakes. It is suggested that you return these papers to the children and review their errors with them individually.

Subtracting Half of a Double

- Seat children so that all can see the balance.

> *"Today you will learn how to subtract half of a double."*

- Point to the balance.

> *"What do we call this?"*   *balance*

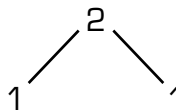> *"What do we use it for?"*   *to compare the weights of objects; to weigh things*

> *"How can we use it to tell if objects have the same weight?"*   *if the balance is level, the objects have the same weight*

> *"I have two color tiles."*

> *"How many should I put in each side to make the balance level?"*

- Put the tiles on the balance.

- Record on the chalkboard:
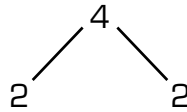
```
      2
     / \
    1   1
```

> *"I have four color tiles."*

> *"How many should I put in each side to make the balance level?"*
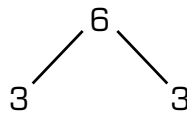
- Put the tiles on the balance.

- Record on the chalkboard:

```
        4
      /   \
     2     2
```

"I have six color tiles."

"How many should I put in each side to make the balance level?"

- Put the tiles on the balance.

- Record on the chalkboard:

```
        6
      /   \
     3     3
```

- Continue with 8, 10, 12, 14, 16, 18, and 20 color tiles, if necessary.

"What do you notice?"   **these are the doubles**

"If we had 40 color tiles, how many would we put on each side to make the balance level?"

"How do you know?"

"If we had 100 color tiles, how many would we put on each side to make the balance level?"

"How do you know?"

"When we want to make the balance level, we put the same number of color tiles on each side."

"We put half of the color tiles on one side of the balance and half on the other side of the balance."

"If we had 24 color tiles, how many color tiles would we put on each side?"

"Half of 24 is 12."

"Will the balance be level if we have seven color tiles to use?"   **no**

- Show this using the balance.

- Repeat with 3, 9, 13, and 5 color tiles.

"Why won't these counters make the balance level?"   **there is an odd number of color tiles; there is one left over**

"When we divide a set of objects in half, both halves must have the same number of objects."

"I have six pennies."

"If I give half of the pennies to _____, how many will I give away?"

"How many will I have left?"

"I have ten pennies."

"If I give half of the pennies to _____, how many will I give away?"

"How many will I have left?"

"Let's make up some problems about giving away half."

• Write the following on the chalkboard:

2   4   6   8   10   12   14   16   18   20

"If I have two pennies and give half away, how many do I have left?"

• Record:
$$\begin{array}{r} 2 \\ -\,1 \\ \hline 1 \end{array}$$

"If I have four pennies and give half away, how many do I have left?"

• Record:
$$\begin{array}{r} 4 \\ -\,2 \\ \hline 2 \end{array}$$

"If I have six pennies and give half away, how many do I have left?"

• Record:
$$\begin{array}{r} 6 \\ -\,3 \\ \hline 3 \end{array}$$

• Repeat with 8, 10, 12, 14, 16, 18, and 20 pennies.

"What do you notice about each example?"

• Allow time for children to offer observations about the examples.

"We will call these examples 'subtracting half of a double facts.' "

"Why do you think we will call them that?"

"There is always a way to check subtraction."

"We can check subtraction by adding up."

• Demonstrate for the children.

"Today we will practice the subtracting half of a double facts."

"Take out your tan addition fact cards."

"What do we call these facts?"   *doubles*

"What do you notice about the facts on the other side?"   *they are subtracting half of a double facts*

"Practice these subtraction number facts with your partner."

CLASS PRACTICE

number fact practice

• Pass out **Fact Sheet S 1.2.**

• Time the children for one minute.

• Review the correcting procedure, if necessary.

- Read the examples and the answers slowly.
- Collect the fact sheets for recording. Return the sheets to the children after recording.

WRITTEN PRACTICE

- Distribute **Worksheet 45A/45B.**
- Read and review each problem with the children.
- Assist children as they work.
- Correct Side A with the children.
- Read and review the directions for the problems on Side B.

   "Who would like to share something you learned in math today?"

- Provide 2–3 minutes for sharing. Allow as many children as possible to respond. Provide appropriate feedback and reinforcement.

Name _____

Date _____

Draw a picture and write a number sentence for this story. Write the answer with a label.

1. Steven has four dimes. Mark has two dimes. How many dimes do they have together?

Number sentence ___4 dimes + 2 dimes = 6 dimes___

Answer ___6 dimes___

How much money is that? ___60¢___

2. I have 7 dimes and 2 pennies. How much money is that? ___72¢___

   I have 3 tens and 8 ones. How much is that? ___38___

3. Count by 10's.

   _10_, _20_, _30_, _40_, _50_, _60_, _70_, _80_, _90_, _100_

   Count by 5's.

   _5_, _10_, _15_, _20_, _25_, _30_, _35_, _40_, _45_, _50_

4. Color the circle divided into fourths red.

   Color the circle divided into halves blue.

   Color the circle divided into eighths green.

   green   red   blue

5. Find the sums.

   40 + 10 = ___50___   10 + 80 = ___90___   10 + 70 = ___80___

6. Fill in the missing addends.

   |3| + 7 = 10   4 + |6| = 10 |8| + 2 = 10

2-45Aa

Name _____ ***LESSON 45A***

Date _____ ***Math 2***

Draw a picture and write a number sentence for this story. Write the answer with a label.

1. Jay counted nine sharpened pencils and six unsharpened pencils in the pencil can. How many pencils are in the can?
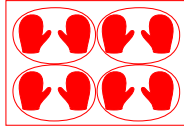
Number sentence _____ 9 pencils + 6 pencils = 15 pencils _____

Answer _____ 15 pencils _____

2. How many mittens are in the box? __8__
Circle pairs of mittens.

How many pairs of mittens are there? __4__

Count by 5's to find the number of fingers in all the mittens.

__40__ fingers

3. What is an even number greater than 6? _____

What is an odd number less than 6? _____   answers may vary

4. Which number on the thermometer is the temperature closest to? __20__ °F

5. How many dimes are there? __6__ How many pennies are there? __4__

How much money is this? __64¢__

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Name _____ ***LESSON 45B***

Date _____ ***Math 2***

Draw a picture and write a number sentence for this story. Write the answer with a label.

1. Ferma has a set of 10 markers. She threw away 3 markers because they were dry. How many markers does she have now?

Number sentence _____ 10 markers − 3 markers = 7 markers _____

Answer _____ 7 markers _____

2. How many gloves are in the box? __6__
Circle pairs of gloves.

How many pairs of gloves are there? __3__

Count by 5's to find the number of fingers in all the gloves.

__30__ fingers

3. What is an even number less than 6? _____

What is an odd number greater than 6? _____   answers may vary

4. Which number on the thermometer is the temperature closest to? __40__ °F

5. How many dimes are there? __5__ How many pennies are there? __6__

How much money is this? __56¢__

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