BRIDGES IN MATHEMATICS 2

GRADE 2 SUPPLEMENT

Set A8 Number & Operations: Ordinal Numbers

Includes

Skills & Concepts

- ★ identify ordinal positions, 1st to 20th
- ★ match the ordinal numbers with an ordered set of at least 100 items
- ★ create, extend, and give a rule for number patterns using addition

Published by The MATH LEARNING CENTER *Salem, Oregon*

P201304

Bridges in Mathematics Grade 2 Supplement
Set A8 Numbers & Operations: Ordinal Numbers

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Prepared for publication on Macintosh Desktop Publishing system.
Printed in the United States of America.

P201304

Bridges in Mathematics is a standards-based K–5 curriculum that provides a unique blend of concept development and skills practice in the context of problem solving. It incorporates the Number Corner, a collection of daily skill-building activities for students.

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Set A8 ★ Activity 1

ACTIVITY

Introducing the Language of Ordinal Numbers

Overview

This is the first of two activities and several independent worksheets that introduce and reinforce the language of ordinal numbers.

Skills & Concepts

★ identify ordinal positions, 1st to 20th

★ match the ordinal numbers, first, second, third, etc. with an ordered set to 100

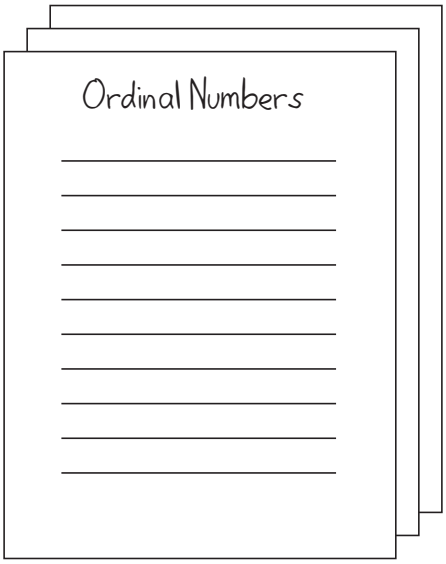
You'll need

★ the Hundreds Grid Chart from Number Corner (see Advance Preparation)

★ the Hundreds Grid Number Cards (see Advance Preparation)

★ 3 sheets of chart paper posted near your discussion area (see Advance Preparation)

Advance Preparation Before you conduct the lesson, take all the cards out of the Hundreds Grid chart, and add or subtract to the collection as needed so you have one card for every child, from 1 through the number that matches your student count. (If you have 24 students, for instance, you will need cards 1 through 24.) Set any other cards aside for now. Draw 10 lines on each of three pieces of chart paper, as shown below. Write the term ordinal numbers at the top of the first sheet. Post the three sheets on an easel or board near your discussion area.



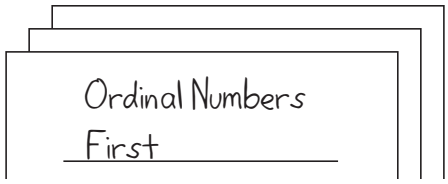
Instructions for Introducing the Language of Ordinal Numbers

1. Ask your students to join you in the discussion area, and seat themselves so they can see the empty Hundreds Grid Chart. Explain that you are going to do some work with ordinal numbers today, using the grid and the number cards. Draw students' attention to the chart paper you have prepared, and read the term *ordinal numbers* with the class. If this term is unfamiliar to most of students, reassure them that they will know more about it by the end of today's math lesson.

Activity 1 Introducing the Language of Ordinal Numbers (cont.)

2. Give students each one number card. Hand the numbers out in random order, so that the child holding the card with a 1 on it might be sitting beside the child holding the card with a 24 on it. Ask students to think privately about where their card belongs on the Hundreds Grid chart.

3. Now write the word *first* on the chart paper, and read it with the class.

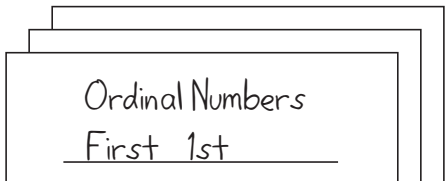


Teacher *Who has the card that belongs in the first pocket on the chart?*

Invite that child up to place his or her card in the first pocket as the others watch. What is the number? Does everyone agree that 1 belongs in the first pocket? How do they know?

Students *Because 1 is first.*
We always put 1 first. It's the first number when you count.

4. Write *1st* on the chart paper next to the word *first*, and explain that sometimes people write the term this way. Has anyone seen or heard either of these words before today? If so, where or when?



Students *Like if you run a race and come in first, you're number 1, so 1st has a 1 in it.*
We get ribbons in swim team that have those numbers, like 1st, 2nd, and 3rd.
Kids always say they want to be first in line, or get the first turn.

5. Now write the terms *second* and *2nd* on the chart paper. Who has the card that goes in the second pocket on the chart? Invite that child up to place his or her card in the second pocket as the others watch. What is the number? Does everyone agree that 2 belongs in the second pocket? How do they know?

6. Skip ahead to the seventh line on the chart paper and write the terms *seventh* and *7th*. Who has the card that goes in the seventh pocket on the chart? Ask children to pair-share their ideas, and then call on a couple of volunteers to share their thinking with the class.

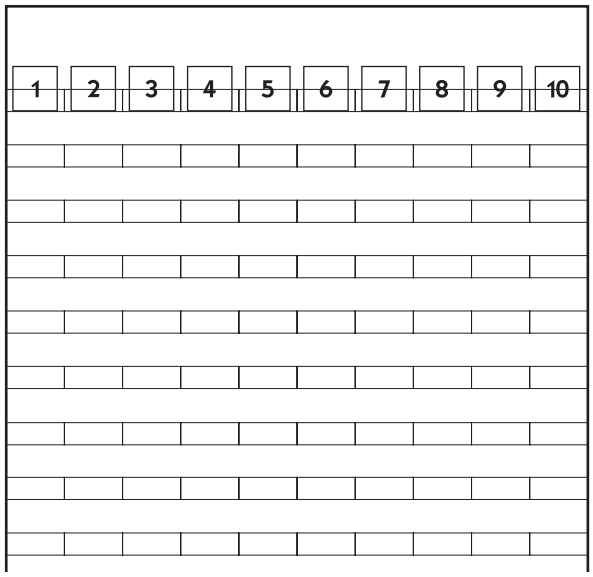
Students *It's my card! I have the 7!*
I think the number matches the pocket. Like 1 goes in the first pocket, 2 goes in the second pocket, so 7 should go in the seventh pocket.

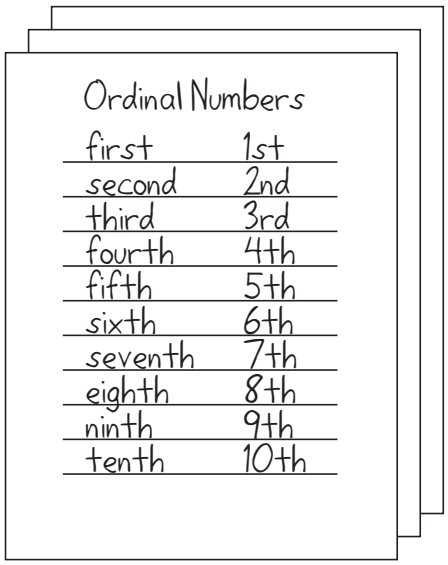
7. Invite the student with the card that belongs in the seventh pocket to come and place it correctly. Ask the class to watch carefully. What did that student have to do to make sure he or she placed it in the correct pocket?

Activity 1 Introducing the Language of Ordinal Numbers (cont.)

Students *Maya had to find the seventh pocket.*
You could go 1, 2, 3, 4, 5, 6, 7, and put it in pocket 7.
I would go backwards because I know the 10 goes at the end of the row.

8. Now write each of the remaining ordinals through tenth (10th) on their respective lines on the chart paper. Each time you record an ordinal number, read it with the class and invite the student holding the card that belongs in that pocket on the Hundreds Grid to bring it up and place it correctly. Work out of order, perhaps writing *fifth* (*5th*), then *third* (*3rd*), then *eighth* (*8th*), and so on until all the lines on the first sheet of chart paper are filled, and all the pockets in the top row of the Hundreds Grid are filled.





9. Read the ordinal numbers on the chart with the class in order, from first to tenth. Then ask children to pair-share any observations they can make. How are the words alike? How are they different? Can students spot any patterns? After a minute or so, have volunteers share their ideas with the class.

Students *Almost all of them end with th.*
The number goes with the word, like 1 is first, and 6 is sixth, and 10 is tenth.
If you're the number 3, you're in the third pocket, like third place.
First ends with st. Second ends with nd. Third ends with rd, and after that, they all end with th.

10. Move the first, and now filled, piece of chart paper to one side, to reveal the other two sheets. Ask all the students who are still holding number cards to raise their hands. Call on them one at a time to say the number on their card loud and clear. As each states his or her number, ask the entire class to respond by naming the pocket in which that card belongs on the Hundreds Grid. Have the student place his or her card in the correct pocket, as you record the ordinal number where it belongs on the remaining two pieces of chart paper. Encourage children to listen carefully and respond quickly to keep the pace lively.

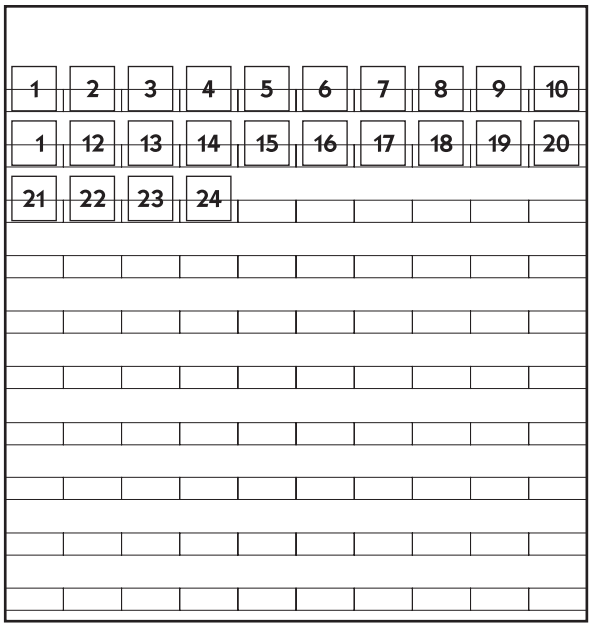
Marco *I have 13 on my card.*

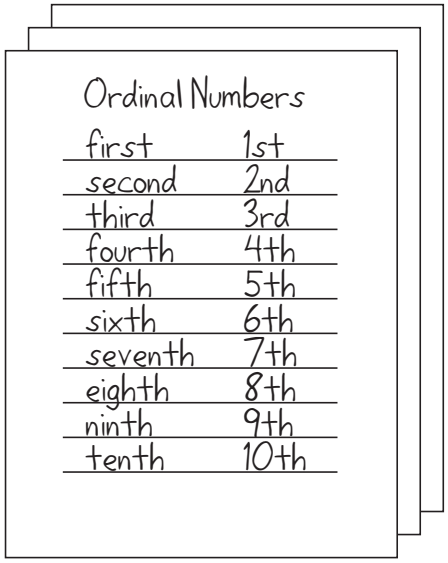
Students *13 goes in the 13th pocket.*

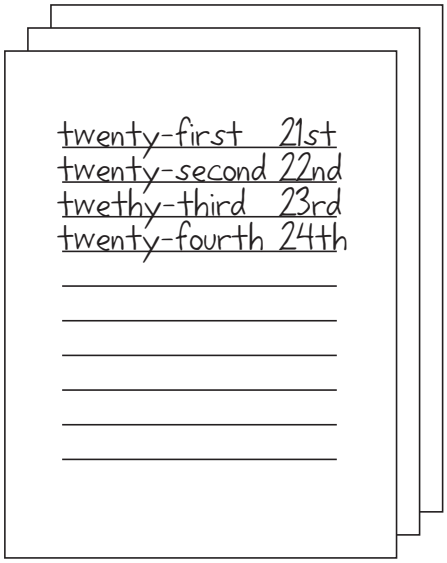
Teacher *Okay, Marco! Please put your card in the 13th pocket.*

Activity 1 Introducing the Language of Ordinal Numbers (cont.)

11. When all the cards have been placed, ask a student to point to each of the terms on the charts as the class reads them together.







12. Conclude the activity by asking children to share observations about the charts. Finally, ask them to give examples of ordinal numbers and explain what these numbers tell us.

> ***Students*** *All the numbers for the second row, like 11th, 12th, 13th, end with th.*
> *Then on the next row, it goes back to the beginning, like first, second, third, but there's a twenty in front, like twenty-first, twenty-second.*
> *An ordinal number tells you what place something is in, like first place, or second place.*
> *It kind of tells the order of the numbers.*

Activity 1 Introducing the Language of Ordinal Numbers (cont.)

Extensions

- Following the lesson, invite volunteers to fill in the remaining lines on the third piece of chart paper as time allows.
- After you have taught this lesson, ask children to re-set the cards in the Hundreds Grid so they reflect the number of days you have been in school. Each day during Number Corner, ask students to report the number of days of school in both cardinal and ordinal form (e.g., We have been in school for 36 days. Today is the 36th day of school).
- Reinforce the language of ordinal numbers whenever you discuss the calendar grid with students (e.g., We just turned over card 28 on our calendar grid. That means it is November 28th.)
- Have children form a circle in your discussion area and count off, starting with 1 (e.g., 1, 2, 3, 4, 5, 6, 7, and so on). Then have them count off a second time, this time reporting their ordinal position in the circle (e.g., first, second, third, fourth, fifth, sixth, seventh, and so on). Ask the third person in the circle to stand up, the seventh to raise his or her hand, the twentieth to walk to the door and back, and so on.

Set A8 ★ Activity 2

ACTIVITY

Grid Pictures

Overview

In this activity, students practice identifying the ordinal positions of various numbers on a hundreds grid. Then they follow a set of instructions to color in selected boxes on a blank grid.

Skills & Concepts

★ identify ordinal positions, 1st to 20th

★ match the ordinal numbers, first, second, third, etc. with an ordered set to 100

★ create, extend, and give a rule for number patterns using addition

You'll need

★ Filled Hundreds Grid (page A8.10, run a class set and 1 copy on a transparency)

★ Blank Hundreds Grid (page A8.11, run a class set and 1 copy on a transparency.)

★ Grid Instructions (page A8.12, run 1 copy on a transparency)

★ a piece of copy paper to mask portions of the overhead

★ crayons (class set)

Instructions for Grid Pictures

1. Place the Filled Hundreds Grid transparency on display at the overhead as helpers give each student a copy of the sheet. Give students a minute or two to pair-share observations about the numbers on the sheet. Can they find and describe any patterns? Can they identify the counting by 2s, 5s, or 10s numbers on the sheet?

2. Now ask children to get out their pencils and circle the first number on the grid. What number is it? Why is it in the first box? Have them circle the hundredth number on the grid. What number is it? Why is it in the hundredth box?

3. Now write the following ordinal numbers on the board: 4th, 8th, 12th, 16th, 20th, 24th, 28th. After you write each ordinal number, ask children to find and circle the number occupying that position on the grid.

4. Ask children to pair-share any observations about the numbers they have circled so far. After a minute or so, have volunteers share their observations with the class. Here are some questions you can pose to spark discussion:

- Do you notice any patterns?
- How do you know which number to circle each time?
- Can you predict what ordinal number I will write on the board next?
- How do you know?

5. Call on a volunteer to name the next ordinal number in your pattern. If he or she is correct, write it on the board, and ask students to find and circle the corresponding number on their grid. (If the student is incorrect, call on another volunteer.) Continue in this fashion through 60, working with input from the children to list the following ordinal numbers on the board as students circle the numbers that occupy those positions on their grids: 32nd, 36th, 40th, 44th, 48th, 52nd, 56th, 60th.

Activity 2 Grid Pictures (cont.)

6. Ask students to share any further observations they have about the pattern. Then have them turn to their neighbors and explain how they know which number to circle each time you write an ordinal number on the board.

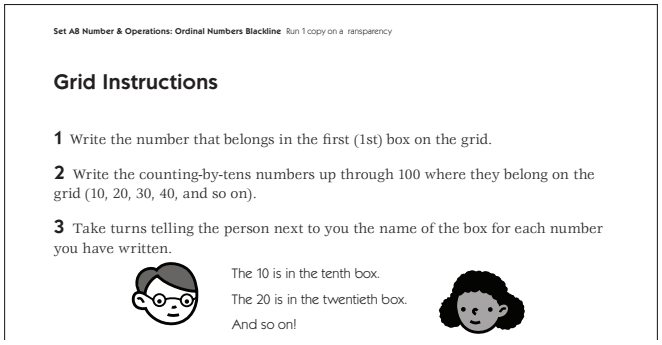
> ***Ethan*** *It's easy. You just find the number. Like when Mrs. Thomas writes 52nd, you just find the 52.*
>
> ***Kim*** *Yeah, like 16 is in the 16th box, and 44 is in the forty-fourth box.*

7. Ask students to move their filled grids to one side for now. Then place the blank grid on display at the overhead as helpers give a copy to each student. After they have entered their name and date on the sheet, give students a few moments to examine the blank grid quietly. Then ask them how many boxes there are on this grid. How do they know?

> ***Students*** *It's 100. I can just tell, because it looks like the other grid, but no numbers. There's 10 in the top row, so I just counted by 10s. It's 100.*

8. Now place the Grid Instructions on display at the overhead, with all but the first line hidden under a sheet of paper. Read the first instruction together and give students a few moments to write the number that belongs in the first box.

9. Move the sheet of paper down to reveal one new instruction at a time. Read each with the class and ask students to complete the task before moving on to the next instruction.



Set A8 Number & Operations: Ordinal Numbers Blackline Run 1 copy on a transparency

Grid Instructions

1 Write the number that belongs in the first (1st) box on the grid.

2 Write the counting-by-tens numbers up through 100 where they belong on the grid (10, 20, 30, 40, and so on).

3 Take turns telling the person next to you the name of the box for each number you have written.

The 10 is in the tenth box.
The 20 is in the twentieth box.
And so on!

10. When you have completed the third instruction on the transparency with the class, ask students to get out their crayons. From here on out, they will be coloring certain boxes on the grid to start a picture. Tell them to circle each box in pencil and check with the person next to them to be sure they agree on the location before coloring their sheets. Encourage them to use the numbers they have written on the grid to help locate the boxes they need, and to refer to their filled Hundreds Grid sheets if they need to.

11. Reveal instructions 4 through 8, giving students time to complete each before moving on to the next. When they have finished, their sheets will look like this.

Activity 2 Grid Pictures (cont.)

Set A8 Number & Operations: Ordinal Numbers Blackline Run 1 copy on a transparency

Grid Instructions

1 Write the number that belongs in the first (1st) box on the grid.

2 Write the counting-by-tens numbers up through 100 where they belong on the grid (10, 20, 30, 40, and so on).

3 Take turns telling the person next to you the name of the box for each number you have written.

The 10 is in the tenth box.
The 20 is in the twentieth box.
And so on!

4 Color these boxes brown: The twenty-fifth (25th) and the thirty-fifth (35th).

5 Color these boxes green: The thirty-fourth (34th) and the thirty-sixth (36th).

6 Color these boxes orange: The forty-third (43rd), the forty-fourth (44th), the forty-fifth (45th), the forty-sixth (46th), and the forty-seventh (47th).

7 Color these boxes yellow: The fifty-fourth (54th) and the fifty-sixth (56th).

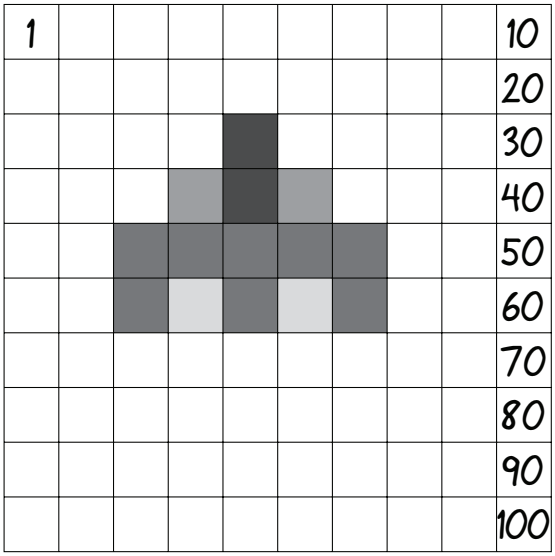
8 Color these boxes orange: The fifty-third (53rd), the fity-fifth (55th), and the fifty-seventh (57th).

9 Now color in any other boxes you want on the grid to make a complete picture. Write the title of your picture at the tiop.

Set A8 Number & Operations: Ordinal Numbers B ack ine Run a c ass set and 1 copy on a ransparency

NAME _____ DATE _____

Blank Hundreds Grid



12. Finally, show instruction 9, which prompts children to color in any other boxes they want to on the grid to complete the picture. Responses will vary from one child to the next; while some may see the top half of a jack-o-lantern, others may see the beginnings of a house, an armored vehicle, a robot, an apartment building, and so on. If you run out of time, have children complete and title their grid pictures at home, and bring them back to school to share with their classmates.

Extensions

- Some children may enjoy circling the counting-by-fours numbers from 60 through 100 on the first Hundreds Grid, and then coloring in those boxes to highlight the pattern.
- To find a web-based source of practice, go to Jenny Eather's Math Dictionary for Kids (http://www.amathsdictionaryforkids.com/). Once you have entered the site, go to the O page and click on the word *ordinal*. Here, you will find a simple definition of the term, as well as two different animated activities designed to reinforce skills with ordinal numbers.

INDEPENDENT WORKSHEET

See Set A8 Independent Worksheets 1–3 for more practice with ordinal numbers.

NAME _____ **DATE** _____

Filled Hundreds Grid

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

NAME _____ **DATE** _____

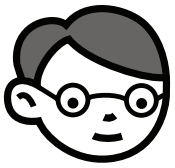
Blank Hundreds Grid

Grid Instructions

1 Write the number that belongs in the first (1st) box on the grid.

2 Write the counting-by-tens numbers up through 100 where they belong on the grid (10, 20, 30, 40, and so on).

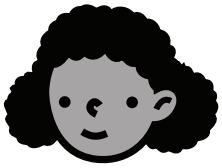
3 Take turns telling the person next to you the name of the box for each number you have written.



The 10 is in the tenth box.

The 20 is in the twentieth box.

And so on!



4 Color these boxes brown: The twenty-fifth (25th) and the thirty-fifth (35th).

5 Color these boxes green: The thirty-fourth (34th) and the thirty-sixth (36th).

6 Color these boxes orange: The forty-third (43rd), the forty-fourth (44th), the forty-fifth (45th), the forty-sixth (46th), and the forty-seventh (47th).

7 Color these boxes yellow: The fifty-fourth (54th) and the fifty-sixth (56th).

8 Color these boxes orange: The fifty-third (53rd), the fifty-fifth (55th), and the fifty-seventh (57th).

9 Now color in any other boxes you want on the grid to make a complete picture. Write the title of your picture at the top.

NAME _____ **DATE** _____

Set A8 ★ Independent Worksheet 1

INDEPENDENT WORKSHEET

Alphabet Line-Up

The alphabet letters are standing in line. The A is first in line. The Z is last in line.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 How many letters are standing in line? _____.

2 Draw a circle around the fifth letter in line. Which letter is it? _____

3 Draw a square around the twelfth letter in line. Which letter is it? _____

4 Draw a star above the twenty-first letter in line. Which letter is it? _____

5 Circle the word you need to fill in the blank.

Example J is the _____ letter in line.	seventh (7th)	tenth (10th)	thirteenth (13th)
a O is the _____ letter in line.	fourteenth (14th)	fifteenth (15th)	twentieth (20th)
b U is the _____ letter in line.	nineteenth (19th)	twentieth (20th)	twenty-first (21st)
c Y is the _____ letter in line.	seventeenth (17th)	twenty-third (23rd)	twenty-fifth (25th)

6 What is the first letter of your name? _____ What is its place in line? _____

NAME _____ **DATE** _____

Set A8 ★ Independent Worksheet 2

INDEPENDENT WORKSHEET

Ordinal Numbers on the Calendar

1 November has 30 days. The first three numbers are filled in. Fill in the rest.

NOVEMBER						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	

2 Draw a circle around the number 7 on the calendar. That is Jon's birthday. Jon's birthday is on the 7th of November.

3 Draw a line under the number 11 on the calendar. That is Veteran's Day. Veteran's Day is on the 11th of November.

4 Draw a triangle around the number 23 on the calendar. That is Thanksgiving.

Thanksgiving is on the _____ of _____.

5 Draw a star by the number 30 on the calendar. That is Maria's birthday.

Maria's birthday is on the _____ of _____.

NAME _____ **DATE** _____

Set A8 ★ Independent Worksheet 3

INDEPENDENT WORKSHEET

Another Grid Picture

Follow the instructions to start a picture on the grid below.

1 Write the number that belongs in the first (1st) box on the grid.

2 Write the counting-by-tens numbers up through 100 where they belong on the grid (10, 20, 30, 40, and so on).

3 Color these boxes blue: 25th, 26th, 34th, and 37th.

4 Color these boxes red: 43rd, 48th, 53rd, 58th, 63rd, and 68th.

5 Color these boxes yellow: 54th and 57th.

6 Now color in any other boxes you want on the grid to make a complete picture.