Eureka Math

4th Grade
Module 3
Lesson 25

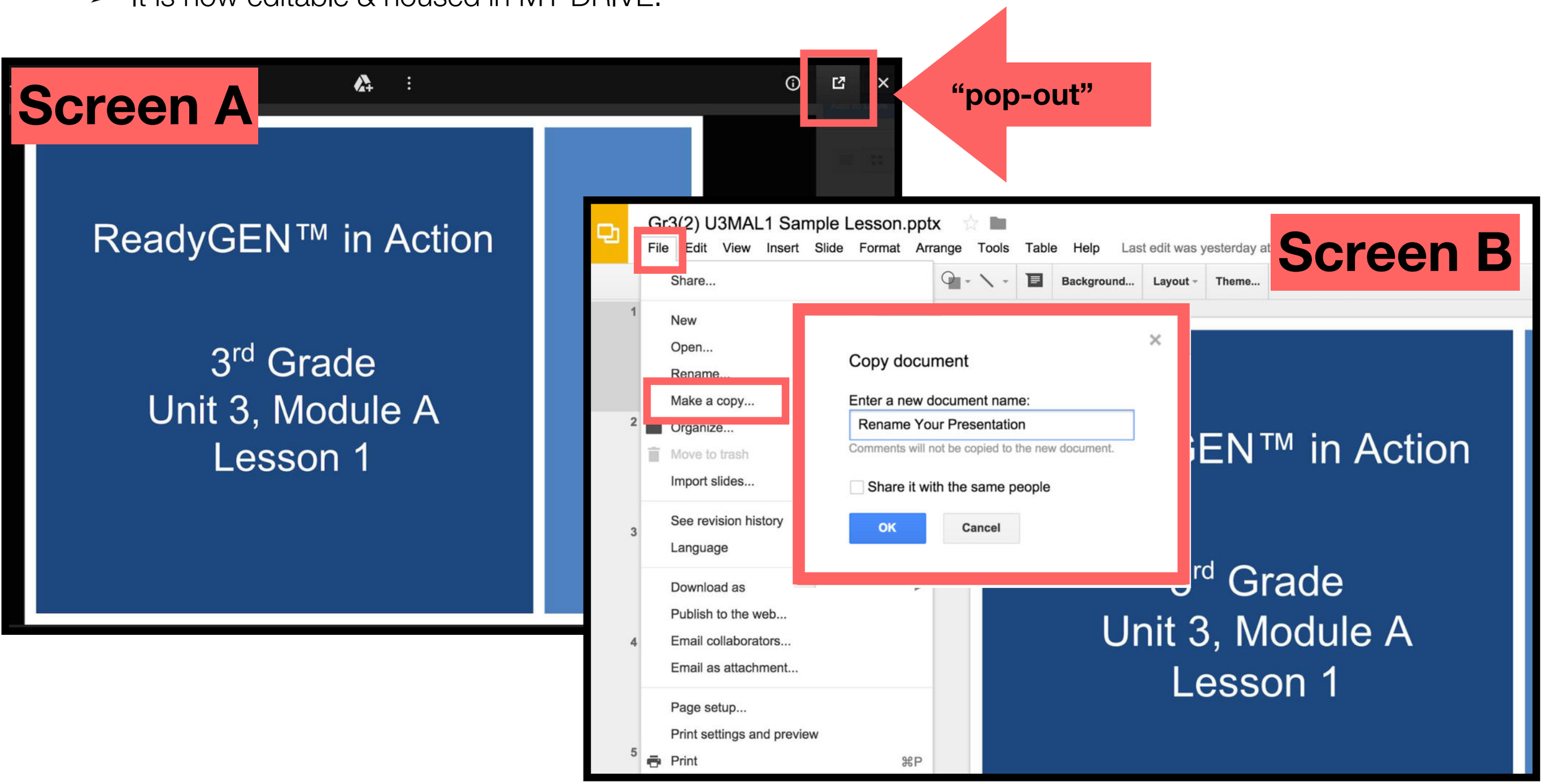
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

Directions for customizing presentations are available on the next slide.

Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- ➢ When the Google Slides presentation is opened, it will look like Screen A.
- ➢ Click on the “pop-out” button in the upper right hand corner to change the view.
- ➢ The view now looks like Screen B.
- ➢ Within Google Slides (not Chrome), choose FILE.
- ➢ Choose MAKE A COPY and rename your presentation.
- ➢ Google Slides will open your renamed presentation.
- ➢ It is now editable & housed in MY DRIVE.



Icons

Read, Draw, Write

Learning Target

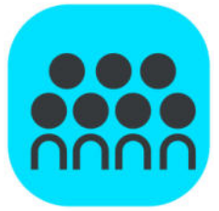
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

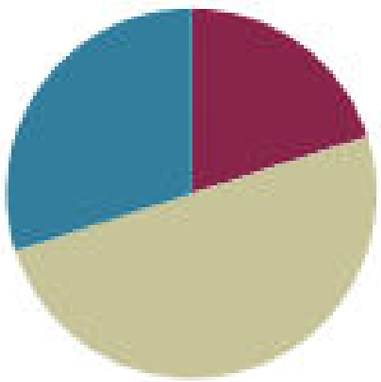
Small Group Time

Lesson 25

Objective: Explore properties of prime and composite numbers to 100 by using multiples.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Concept Development	(30 minutes)
Student Debrief	(18 minutes)
Total Time	**(60 minutes)**



Objective: Explore properties of prime and composite numbers to 100 by using multiples.

Test for Factors

40, 64, 54, 42

Use division to prove both 4 and 2 are factors of 40.

Test for Factors

40, 64, 54, 42

Write the numbers that have 6 as a factor.

Test for Factors

40, 64, 54, 42

Prove that both 3 and 2 are factors of 54 and 42, using the associative property.

Test for Factors

40, 64, 54, 42

Write the numbers that have 8 as a factor.

Test for Factors

40, 64, 54, 42

Prove that both 4 and 2 are factors of 40 and 64, using the associative property.

Multiples Are Infinite

Have students make groups of four. Assign each foursome a different number to count by starting at 0. Allow students two minutes to count round robin in their groups.

Multiples Are Infinite

Let’s share our results.

Could you have kept counting by (assigned number) after I told you to stop?

Multiples Are Infinite

We now know the multiples for any number are infinite—they go on forever. How is that different from the factors of a number? Turn and talk to your partner about this question.

List Multiples and Factors

3

List as many multiples of 3 as you can in the next 20 seconds. Take your mark. Get set. Go.

List Multiples and Factors

3

List the factors of 3.

List Multiples and Factors

4

List the first ten multiples of 4.

List the factors of 4

List Multiples and Factors

5

List the first ten multiples of 5.

List the factors of 5

Concept Development

Materials

- [ ] (S) Materials: Problem Set, orange crayon, red crayon

Multiples

Let's take a look at the number chart in front of you. What is the smallest prime number you see on the chart?

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

Multiples

What is the greatest composite number you see? How do you know?

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

Multiples

Shade the number 1 red.

	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

Multiples

Circle the first unmarked number.

	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

Multiples

Cross off every multiple of that number except the one you circled.

	2	3	✕	5	✕	7	✕	9	✕
11	✕	13	✕	15	✕	17	✕	19	✕
21	✕	23	✕	25	✕	27	✕	29	✕
31	✕	33	✕	35	✕	37	✕	39	✕
41	✕	43	✕	45	✕	47	✕	49	✕
51	✕	53	✕	55	✕	57	✕	59	✕
61	✕	63	✕	65	✕	67	✕	69	✕
71	✕	73	✕	75	✕	77	✕	79	✕
81	✕	83	✕	85	✕	87	✕	89	✕
91	✕	93	✕	95	✕	97	✕	99	✕

Multiples

a. Circle the first unmarked number.

b. Cross off every multiple of that number except the one you circled. If it's already crossed off, skip it.

c. Repeat Steps (a) and (b) until every number is either circled or crossed off.

	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~~

Multiples

a. Circle the first unmarked number.

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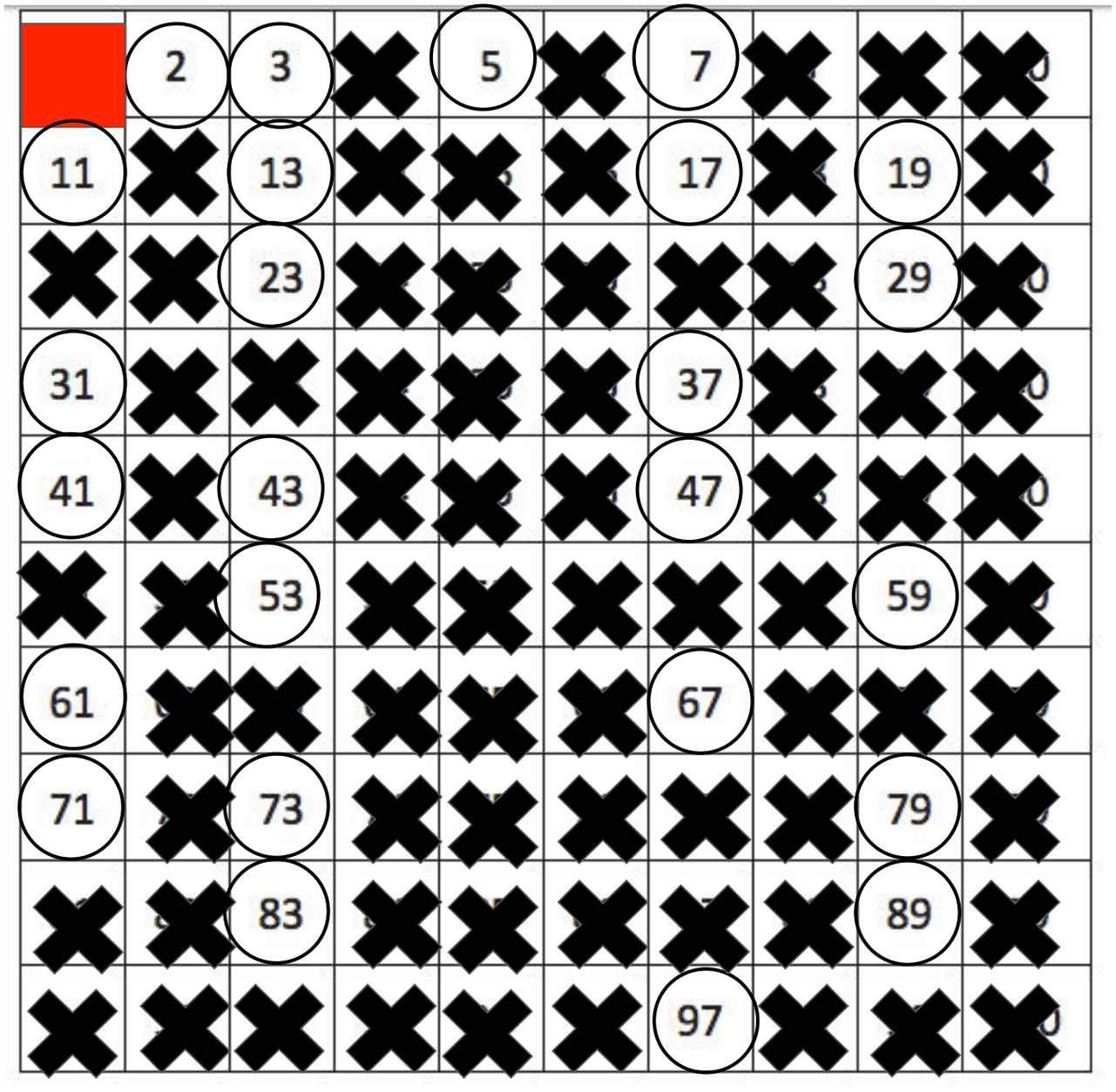
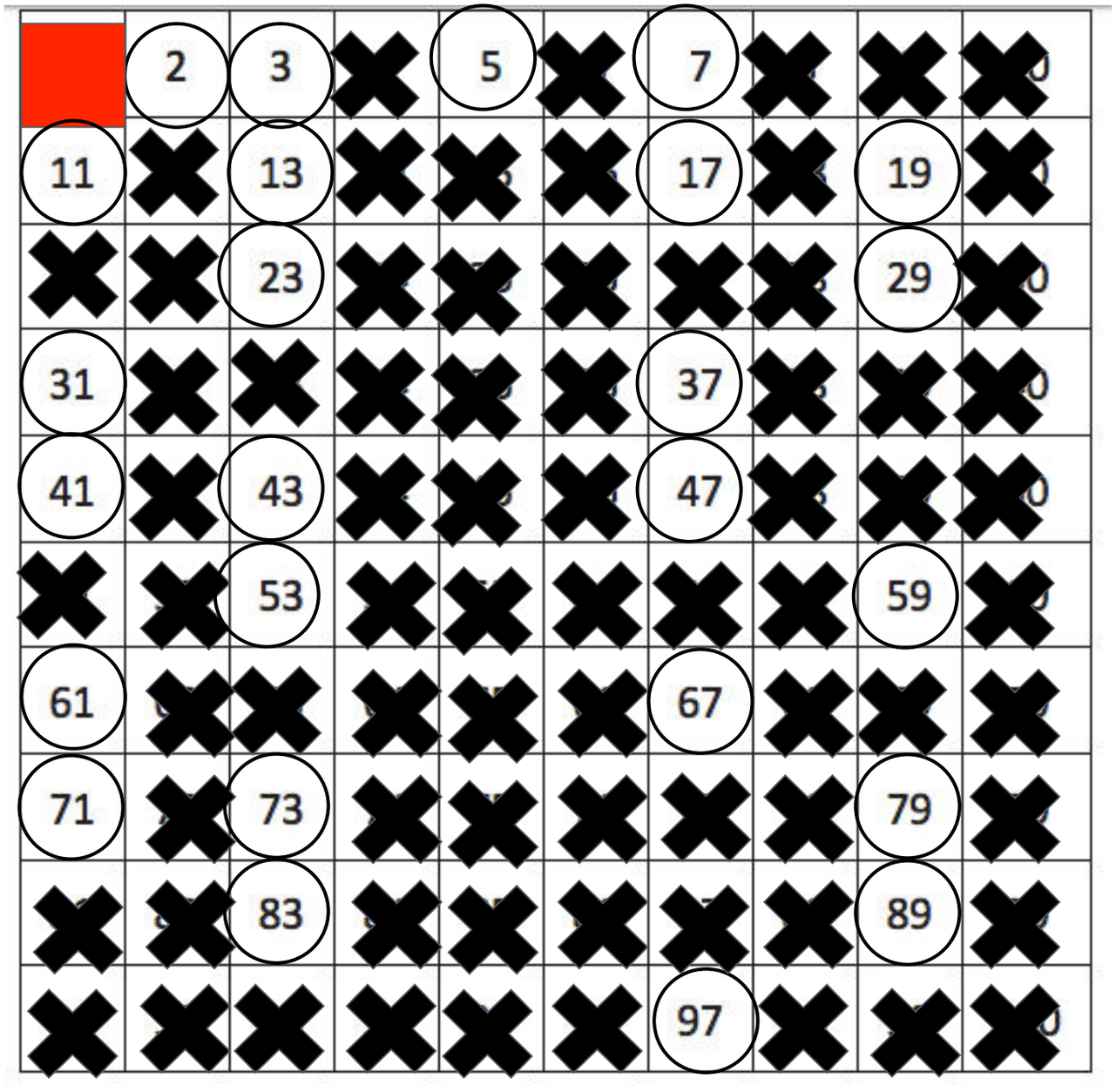


Multiples

After you marked off multiples of 7, what was the next number that you circled?

Were there any multiples of 11 that hadn't been crossed out already?

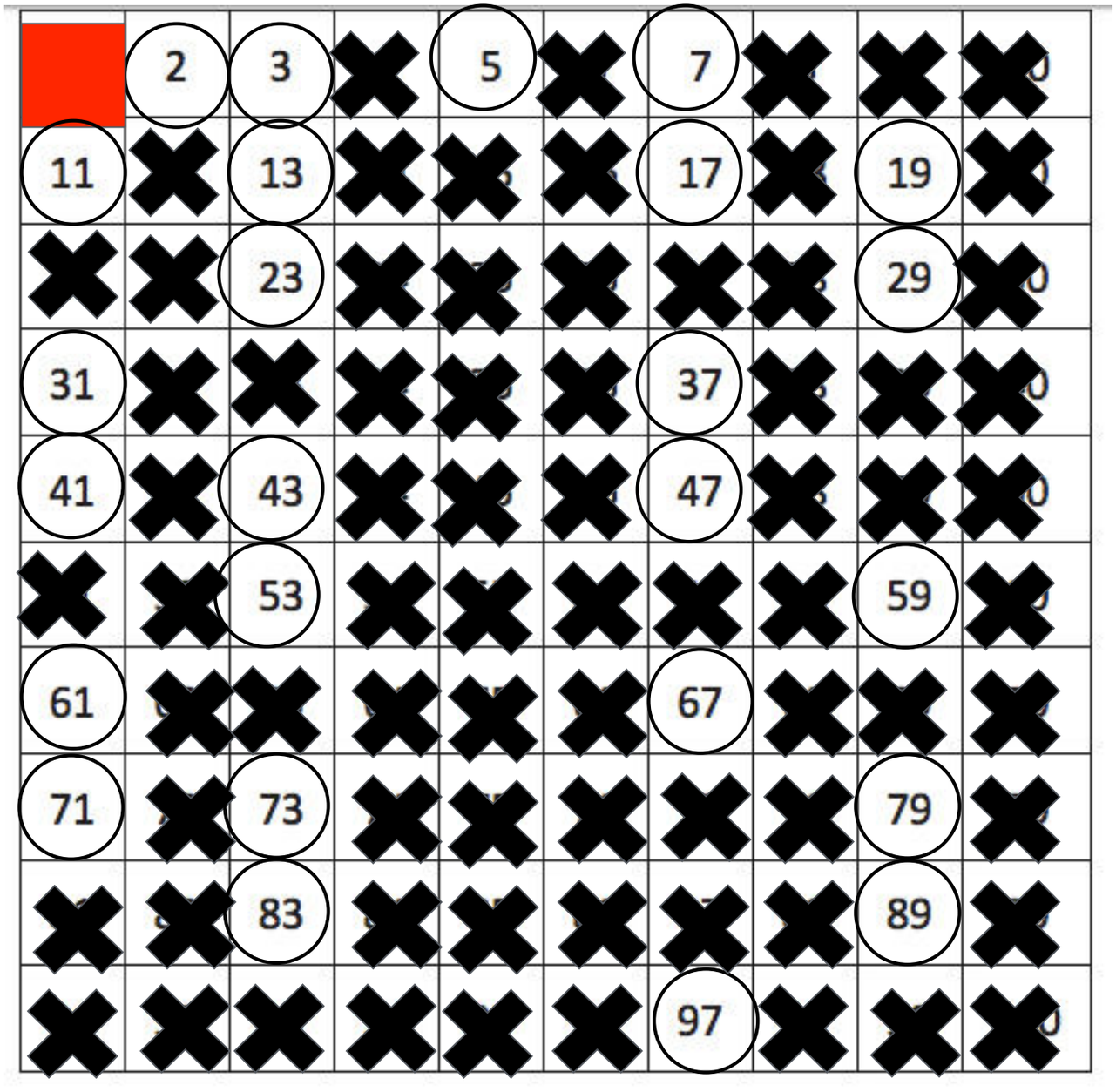
What about 13? Are there any multiples of 13 that still need to be crossed off?



Multiples

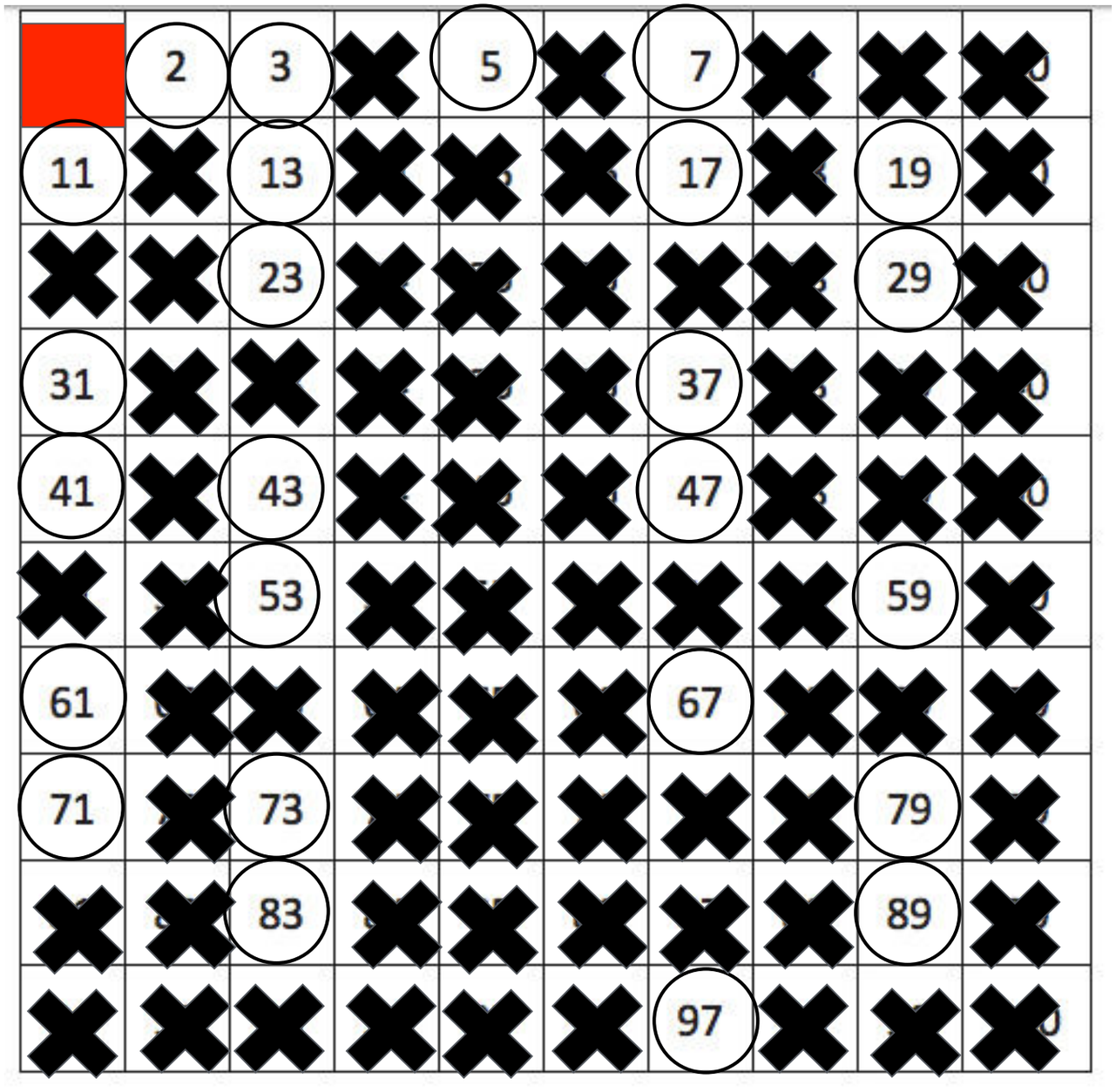
I wonder if that's true of the rest? Go back to 11. Let's see if we can figure out what happened. Count by elevens within 100 using the chart.

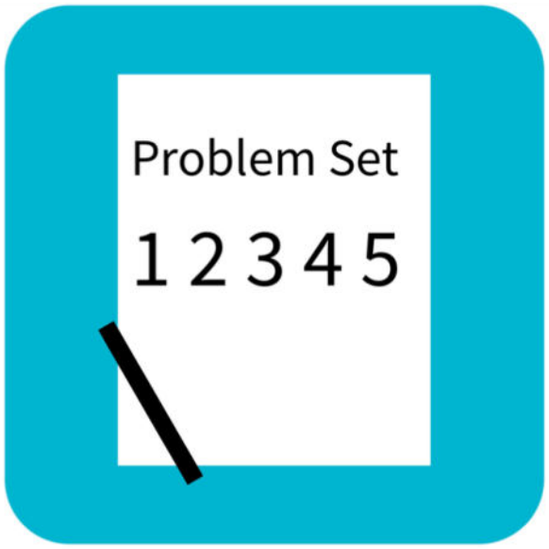
So, by the time we circled 11, is it true that we'd already marked all of the multiples of 2, 3, all the way up to 10?



Multiples

Take a moment to figure out how many multiples of 13 are within 100.





Problem Set

2. a. List the circled numbers.

b. Why were the circled numbers not crossed off along the way?

Debrief

Participate in the discussion by...

- Thinking about the question.
- Sharing your work.
- Explaining your strategy.
- Listening to others.

Debrief

- Which numbers are circled? Which numbers are crossed out?
- We started this Problem Set by coloring number 1 red and beginning our work with the multiples of 2. Why didn't we cross out the multiples of 1?
- Are any prime numbers even? Are all odd numbers prime?
- We crossed off multiples of 2, 3, 5, and 7. Why didn't we have to cross off multiples of 4 or 6?
- How did you know some of the larger numbers, like 53 and 79, were prime?

Exit Ticket

Name _____ Date _____

Use the calendar below to complete the following:

1. Cross off all composite numbers.
2. Circle all of the prime numbers.
3. List any remaining numbers.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					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						