

Powerdot

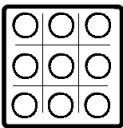


Multiplication

A Multisensory Learning Approach To Multiplication and Skip Counting

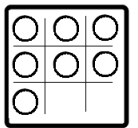


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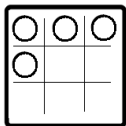
X3

7



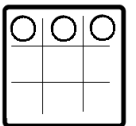
X4

4



X4

3



X8

SAMPLE SEVENS UNIT

(Excerpts from Powerdot Math Workbook and free MP3 song)

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WWW.POWERDOTMATH.COM

Powerdot Math Multiplication

Frequently Asked Questions

What is Powerdot Math Multiplication?

Powerdot Math is a powerful multisensory learning program that has helped students master multiplication for over 20 years. Using this system, children not only learn their multiplication facts quickly and easily, they also gain a deep understanding of what multiplying means. The techniques used in Powerdot Math Multiplication are supported by years of research and classroom trials.

At the heart of the program is an audio CD that contains fun and exciting songs. Each song uses mnemonic devices to teach the students how to quickly count the multiples of any given number between 0 and 12 (this technique is also known as skip-counting). Coupled with this, is the effective Powerdot Math Number System. In this system, every number from 1 through 12 has corresponding Powerdots. These Powerdots help the student to easily count using multiples, and to help the learner quickly transition from counting on their fingers to a quicker, more effective method. By using the “Lock In” technique taught in this program, students memorize multiplication facts as they progress through the program and, over time, typically eliminate or reduce their need to skip-count.

Who is Powerdot Multiplication for?

For older students, Powerdot Multiplication is great for children who have difficulty memorizing multiplication facts. It has also been shown to be a powerful tool for students learning long division (because it makes finding factors and lowest common denominators easier).

For younger students, Powerdot Multiplication is a great way to introduce the concept of multiplying because students can visually see how multiplication is simply adding the same number again and again.

How is Powerdot Math Multiplication different from other multiplication music programs?

Though there are many music multiplication programs available on the market today, most are auditory only, and do not involve a true multisensory approach to learning. By not engaging students kinesthetically and visually, research has shown that many children will have difficulty retaining the math concepts being taught. Of the programs on the market that are truly multisensory, most are extremely expensive, typically costing more than two or three times as much as Powerdot Math Multiplication. It is our goal to provide a true multisensory multiplication program at a reasonable and affordable price.

How to Use Powerdot Math Multiplication

Step One:

Start with the “Practicing Powerdots” worksheets on pages 3 and 4 of this unit. This will help your student learn where the Powerdots go for each corresponding number. Have students mark the Powerdots in the numbered order shown in the example.

Step Two:

Play the “Sgt. Seven” song. Have the student read the words on page 5 and sing along a few times. NOTE: A free video of this song can be viewed at WWW.POWERDOTMATH.COM/free-videos.html, and can also be found by searching for “Powerdot Math” on YouTube, TeacherTube and Vimeo.

Step Three:

Have your student sing along until they have memorized the words to the chorus. It typically does not take more than 5–20 minutes.

Step Four:

Turn to page 6 of this unit. Go over the instructions with your student. Have them complete the page. If they complete the page correctly, have them advance to the next page. If they had trouble, review the “Sgt. Seven” song, and have them correct their errors.

Step Five:

Continue through the unit as you did in step four. Each day, begin the lesson by reviewing the Powerdot Math song(s) the student is working on. Then go over the instructions for the next page. Have the student complete the page. If they are successful, move ahead. If they are not, review the song and help the child correct the errors on their worksheet.

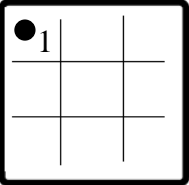
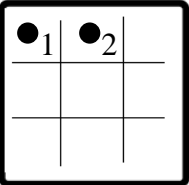
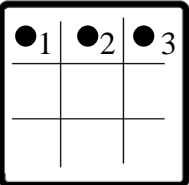
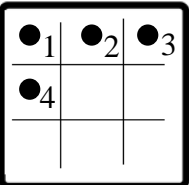
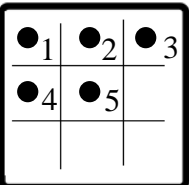
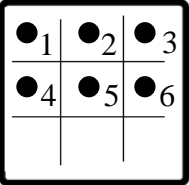
Troubleshooting: If students have trouble completing the “Fill in the Multiples” pages in each unit, have them review the “Practicing Powerdots” pages at the beginning of this unit. These pages review the order that the Powerdots should be counted in. Have students practice drawing Powerdots on blank paper. If a student is counting the Powerdots correctly, but is still not coming up with correct answers, make sure they are reciting the multiples correctly, and that they are counting one dot for each number (and not one dot for each syllable of the words).

Advanced Tips:

1. When a student is confident in their use of Powerdots, you may want to try this advanced step. When the student gets to the “Fill in the Multiples” page, have them try to complete the worksheet without actually drawing the Powerdots. Instead, have them imagine where the Powerdots are for each number, then move their pencil tip towards each imaginary dot and tens slash as they count their multiples. This will help increase their speed.
2. Whenever a student knows an answer to a problem without having to count multiples, have them write the answer down. If they are unsure of their answer, they can check it using the Powerdots. As the student develops more skill, and advances through the Powerdot units, the need to recheck every “known” answer should be phased out.

Practicing Powerdots 0-6

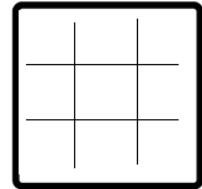
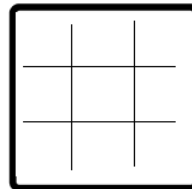
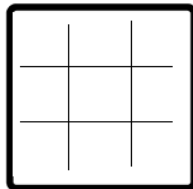
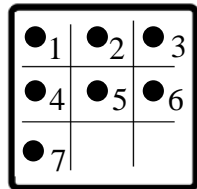
Practice drawing the Powerdots for the numbers on each row.
Draw the dots in the same order as the numbered example. Don't write the numbers.

0	(No dots go in the zero box)			
1				
2				
3				
4				
5				
6				

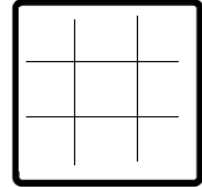
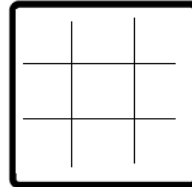
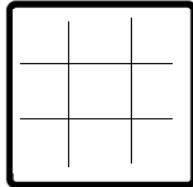
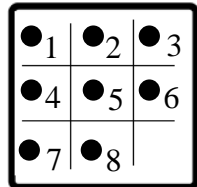
Practicing Powerdots 7-12

Practice drawing the Powerdots for the numbers on each row.
 Draw the dots and slash in the same order as the numbered example.
 Don't write the numbers.

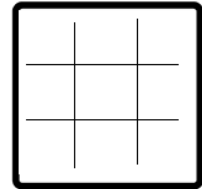
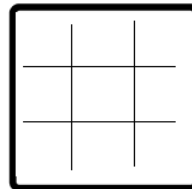
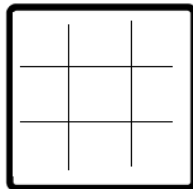
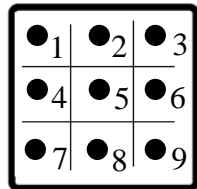
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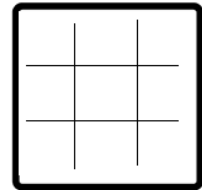
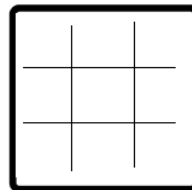
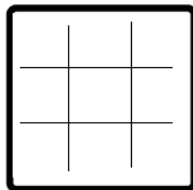
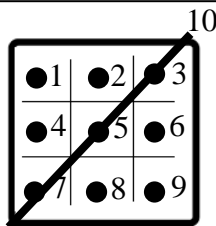
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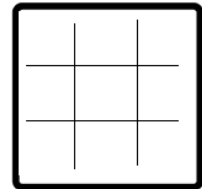
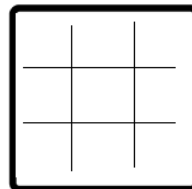
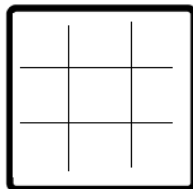
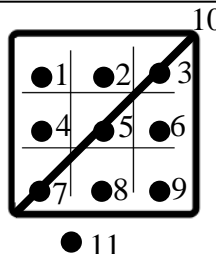
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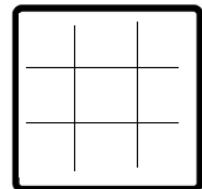
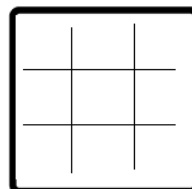
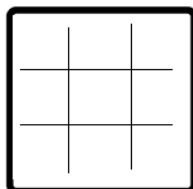
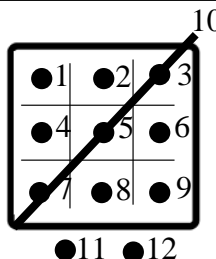
10



11



12



Seven Song

Lyrics for audio track

Counting sevens is such fun. 7, 14, 21,
Come and see what I can do. 28, 35, 42,
Easier than ABC 49, 56, 63,
70 is next, there's more 77, 84.

Sergeant Seven is my name
Counting sevens is my game
Sergeant Seven is my name
Counting sevens is my game
Sergeant Seven is my name
(Back to the top)

That was good.
That was fine.
Now let's do it one more time.

Chorus:

Counting seven is such fun. 7, 14, 21,
Come and see what I can do. 28, 35, 42,
Easier than ABC 49, 56, 63,
70 is next, there's more 77, 84.

Sergeant Seven is my name
Counting sevens is my game
Sergeant Seven is my name
Counting sevens is my game

That was good.
That was fine.
Now let's try it all streamline.

Streamline Chorus:

7, 14, 21, 28, 35, 42, 49, 56, 63, 70
77, 84 Count your sevens out the door.

7, 14, 21, 28, 35, 42, 49, 56, 63, 70
77, 84 Count your sevens out the door.

Watch the free video for this song at
www.PowerDotMath.com/free-videos.html

Once students have memorized the chorus,
they are ready to complete the workbook
pages.

Advanced: Learning the "Streamline
Chorus," is a little harder, but will allow
students to work even quicker.





Name _____

Multiples of 7

7 14 21 28 35 42 49 56 63 70 77 84

Skip count by seven as you count the Powerdots for each of the bottom numbers. Any time you come to a problem that you already know the answer to, write the answer first, then check it with the Powerdots if needed.

Brain Lock: While writing the answer, be sure to say the problem and answer three times softly as you trace over the problem and answer. This will help you memorize it for next time.

$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

○	○	○

$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

○	○	○
○		

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

○	○	○
○	○	○

$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$

○	○	○
○	○	○
○	○	○

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

○	○	○
○	○	○
○		

$$\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$$

○		

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

○	○	○
○	○	

$$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$$

○	○	

$$\begin{array}{r} 7 \\ \times 12 \\ \hline \end{array}$$

○	○	○
○	○	○
○	○	○

○ ○

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

○	○	○
○	○	○

$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

○	○	○
○	○	○
○		

$$\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$$

○	○	○
○	○	○
○	○	○

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

○	○	○
○	○	○
○		

$$\begin{array}{r} 7 \\ \times 11 \\ \hline \end{array}$$

○	○	○
○	○	○
○	○	○

○

$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

○	○	○
○	○	○
○		

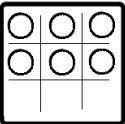
More Multiples of 7

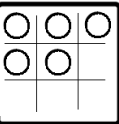
Fill in the missing multiples of 7

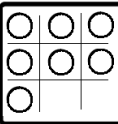
7 35 42 84

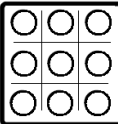
Now try some problems with the 7 on the bottom. Just like before, skip count by seven as you count the Powerdots for the other number in each problem. If you can answer a problem without counting the multiples, go ahead and just put the answer down, but then check it with the Powerdots if you're not completely sure of your answer.

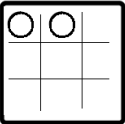
Brain Lock: While writing the answer, be sure to say the problem and answer three times softly as you trace over the problem and answer. This will help you memorize it for next time.

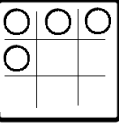
$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$


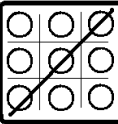
$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$


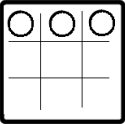
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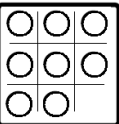
$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$


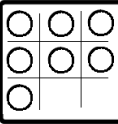
$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 12 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$


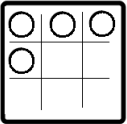


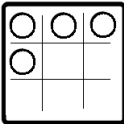
Flip-Flop Sevens

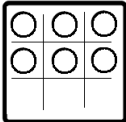
Fill in the missing multiples of 7

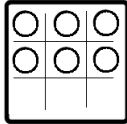
___ ___ 28 ___ ___ 56 ___ ___ 84

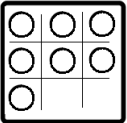
Flip-flop the top and bottom number and you will get the same answer. Complete the problems below. The first one has been done for you.

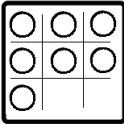
$$\begin{array}{r} 7 \\ \times 4 \\ \hline 28 \end{array}$$


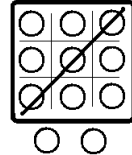
$$\begin{array}{r} 4 \\ \times 7 \\ \hline 28 \end{array}$$


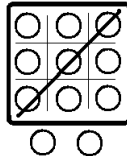
$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$


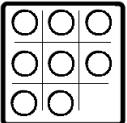
$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$


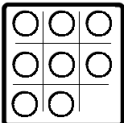
$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$


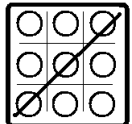
$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$


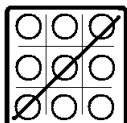
$$\begin{array}{r} 7 \\ \times 12 \\ \hline \end{array}$$


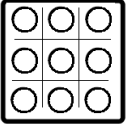
$$\begin{array}{r} 12 \\ \times 7 \\ \hline \end{array}$$


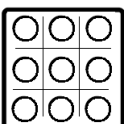
$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$


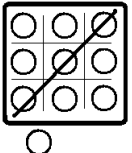
$$\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$$


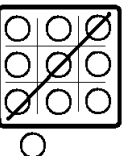
$$\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$$


$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$


$$\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$$


$$\begin{array}{r} 7 \\ \times 11 \\ \hline \end{array}$$


$$\begin{array}{r} 11 \\ \times 7 \\ \hline \end{array}$$


Fill in the multiples of 7

Draw the Powerdots in each box. The dots should match the number on the left. Skip count by seven to complete the problems.

Tips: When you draw your Powerdots, don't try to make a circle for each dot. Instead, just make a quick dot in each space where the Powerdots belong.

*See "Advanced Tips" on page 2 to increase speed.

Brain Lock: While writing the answer, be sure to say the problem and answer three times softly as you trace over the problem and answer. This will help you memorize it for next time.

$$\begin{array}{r} 7 \\ \times 3 \\ \hline 21 \end{array}$$

$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 12 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

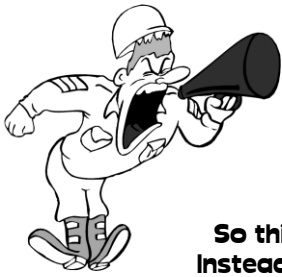
$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$$



Sevens

Self-Checking Practice Sheet

So this page can be used over again, do not write your answers on this page. Instead, just say them out loud and then check your answers by lifting the flaps.

How to set up this page:

Step 1. Cut along the dotted lines on the bottom of the page.

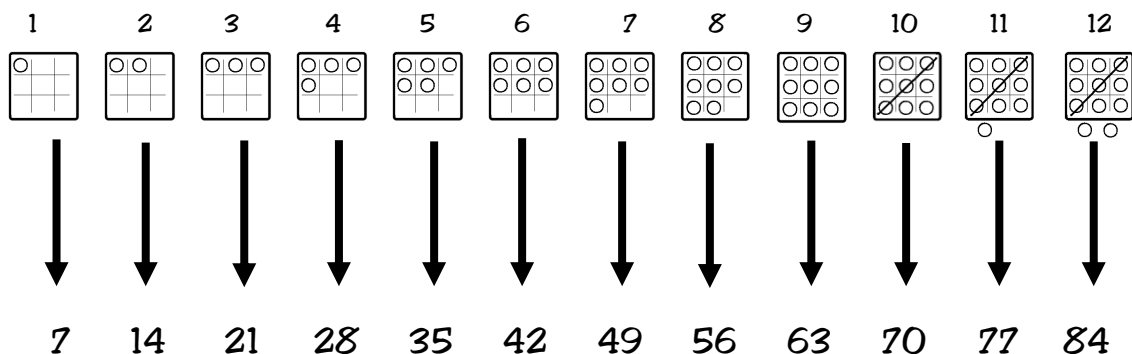
Step 2. Fold each flap forward so that it covers the answers.

Step 3. For each math problem below, use the Powerdots at the bottom to count by the multiples of 7. For example, if the problem is 7×4 , go to the cube with 4 Powerdots on it, and then count the dots as you say the multiples of seven (7, 14, 21, 28).

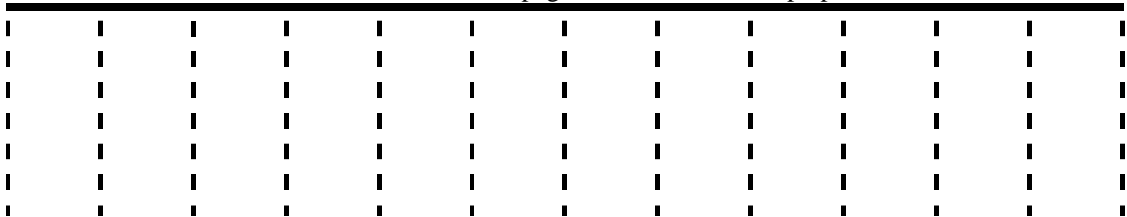
Step 4. Say the math problem and your answer out loud.

Step 5. Lift the flap and see if you are correct. If you are, repeat the problem and answer out loud three times ("Seven times four is twenty-four") If you miss any problems, review the multiples of 7 song and redo this page.

$7 \times 1 =$ _	$7 \times 2 =$ _	$7 \times 3 =$ _	$7 \times 4 =$ _
$7 \times 5 =$ _	$7 \times 6 =$ _	$7 \times 7 =$ _	$7 \times 8 =$ _
$7 \times 9 =$ _	$7 \times 10 =$ _	$7 \times 11 =$ _	$7 \times 12 =$ _
$7 \times 4 =$ _	$7 \times 7 =$ _	$7 \times 9 =$ _	$7 \times 6 =$ _
$7 \times 8 =$ _	$7 \times 12 =$ _	$7 \times 3 =$ _	$7 \times 5 =$ _
$7 \times 1 =$ _	$7 \times 11 =$ _	$7 \times 2 =$ _	$7 \times 4 =$ _



Cut on the dotted lines to the bottom of the page. Then fold each flap up to cover the bottom numbers.



Speed Practice

Name _____

As quickly as you can, write the multiples of 7 in on the multiplication chart.

Write them in the blanks both across and down.

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6		8	9	10	11	12
2	2	4	6	8	10	12		16	18	20	22	24
3	3	6	9	12	15	18		24	27	30	33	36
4	4	8	12	16	20	24		32	36	40	44	48
5	5	10	15	20	25	30		40	45	50	55	60
6	6	12	18	24	30	36		48	54	60	66	72
7												
8	8	16	24	32	40	48		64	72	80	88	96
9	9	18	27	36	45	54		72	81	90	99	108
10	10	20	30	40	50	60		80	90	100	110	120
11	11	22	33	44	55	66		88	99	110	121	132
12	12	24	36	48	60	72		96	108	120	132	144

Answer keys for Sevens Unit

Hey, Don't Forget!

If you liked this sample unit, the complete
Powerdot Math workbook and music for numbers 0 - 12
is available at

www.powerdotmath.com/free-videos.html and
www.teacherspayteachers.com/Store/Powerdot-Math

Pages 1 – 5: No Answer Key Needed

Page 6:

21	28	42	63	49
7	35	14	84	42
56	70	49	77	56

Page 7:

14, 21, 28,	49, 56, 63, 70, 77,		
42	35	49	63
14	28	84	
21	56	49	



Answer keys for Sevens Unit

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Page 8: 7, 14, 21, 35, 42, 49, 63, 70, 77,

		42	42
49	49	84	84
56	56	70	70
63	63	77	77

Page 9: 7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

	42	35	28	7
35	84	77	14	49
56	28	63	21	70

Page 10:

7	14	21	28
35	42	49	56
63	70	77	84
28	49	63	42
56	84	21	35
7	77	14	28

Page 11:

	7
	14
	21
	28
	35
	42
7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84	
	56
	63
	70
	77
	84