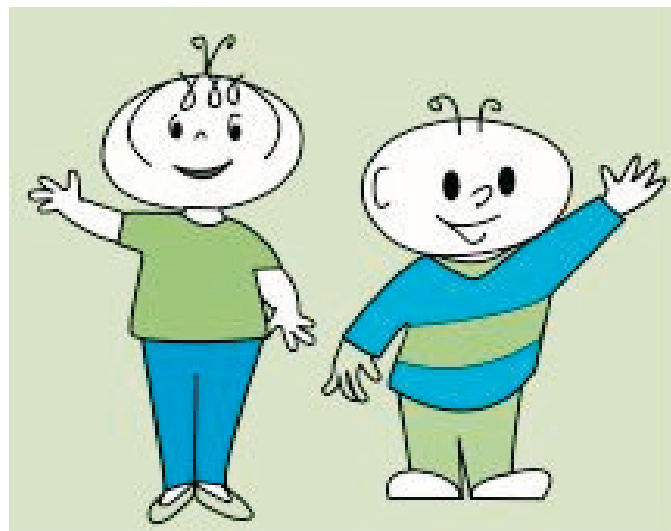


WELCOME!

Modeling multiplication for young children

ATMNE—Providence, RI
October 22, 2004



Sarah Cremer
Education Development Center, Inc.

Education Development Center, Inc. (EDC) is an international, non-profit organization with 325 projects dedicated to enhancing learning, promoting health, and fostering a deeper understanding of the world.

<http://www.edc.org>

Within EDC, the **Division of Mathematics, Learning and Teaching (MLT)** creates curriculum materials, researches mathematics education, and designs professional development for teachers, administrators and other leaders.

<http://www2.edc.org/MLT>

Math Workshop is a National Science Foundation funded project, producing an elementary mathematics curriculum that balances deep understanding with purposeful computational practice.

<http://www2.edc.org/mathworkshop>

Harcourt School Publishers will begin publishing the curriculum next year under a name to be determined.

Please give me your feedback!

Email: scremer@edc.org

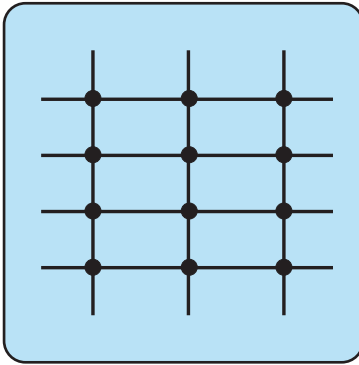
Mail: Sarah Cremer
EDC-MLT
55 Chapel Street
Newton, MA 02458

If you are interested in testing the curriculum as a summative evaluation site next year, please contact us!

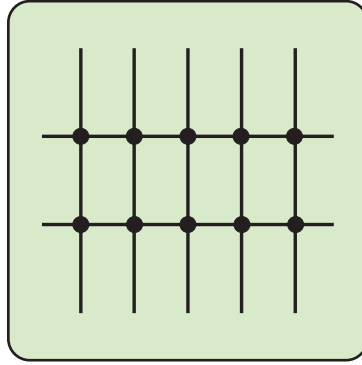
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Date: _____

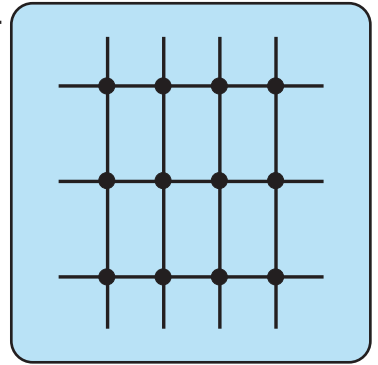
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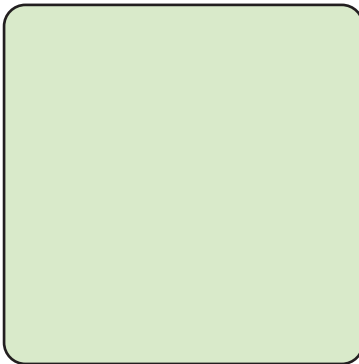
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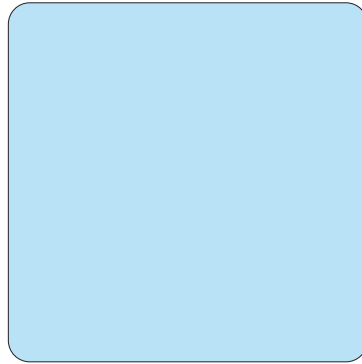
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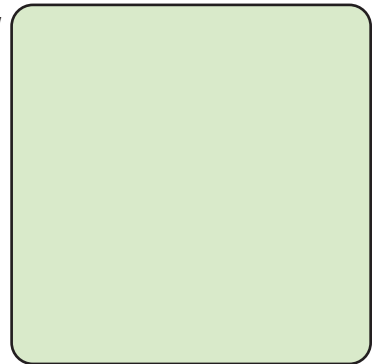
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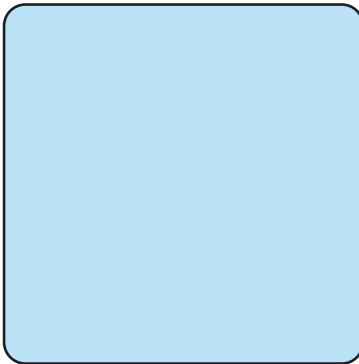
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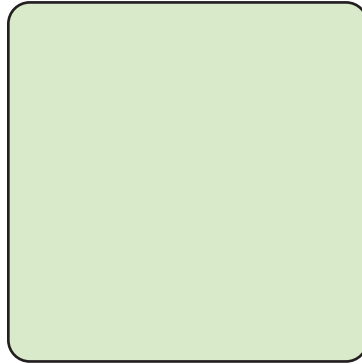
W



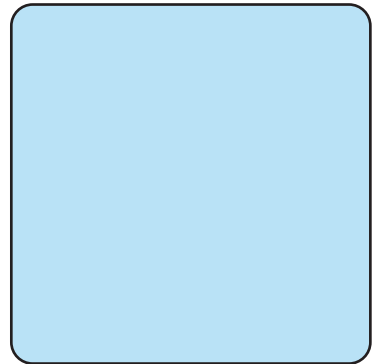
X



Y



Z

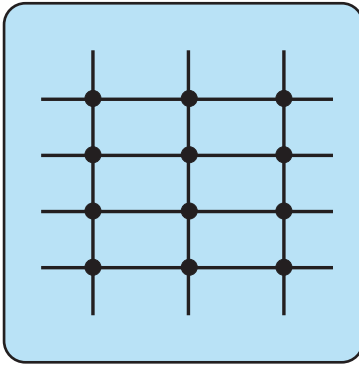


	R	S	T	U	V	W	X	Y	Z
Lines	4		3	3	6	0	5	2	
Lines	3	5			2	5			4
	12			9			10	12	16

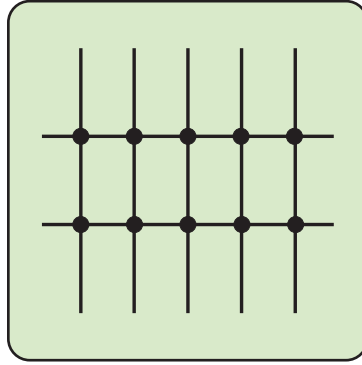
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Date: _____

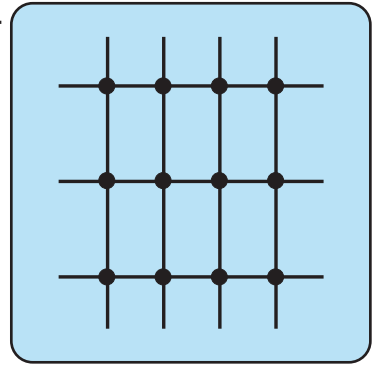
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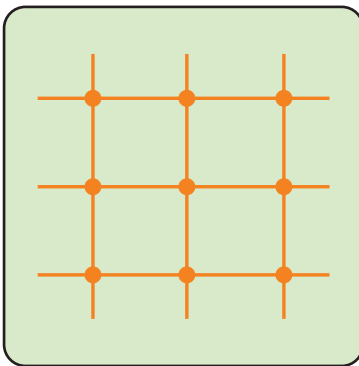
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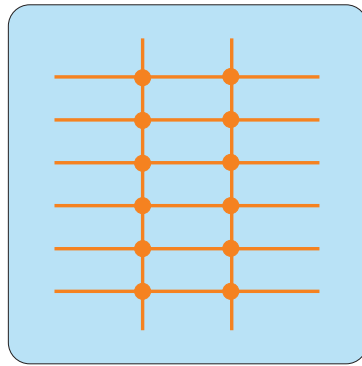
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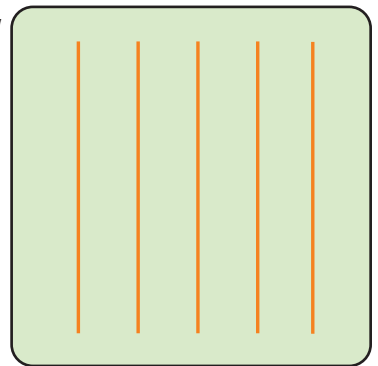
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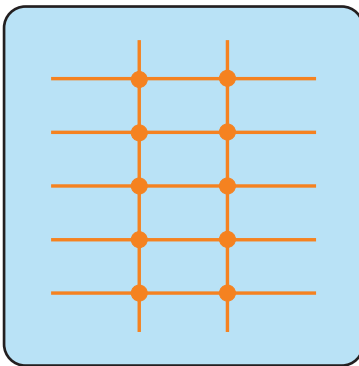
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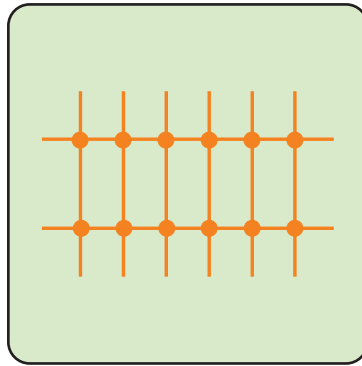
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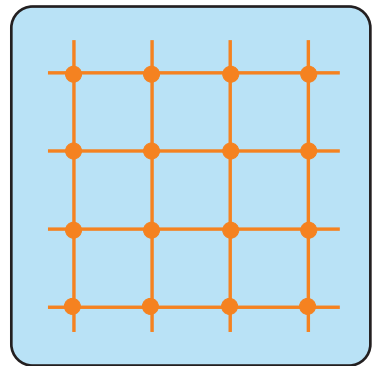
X





Y

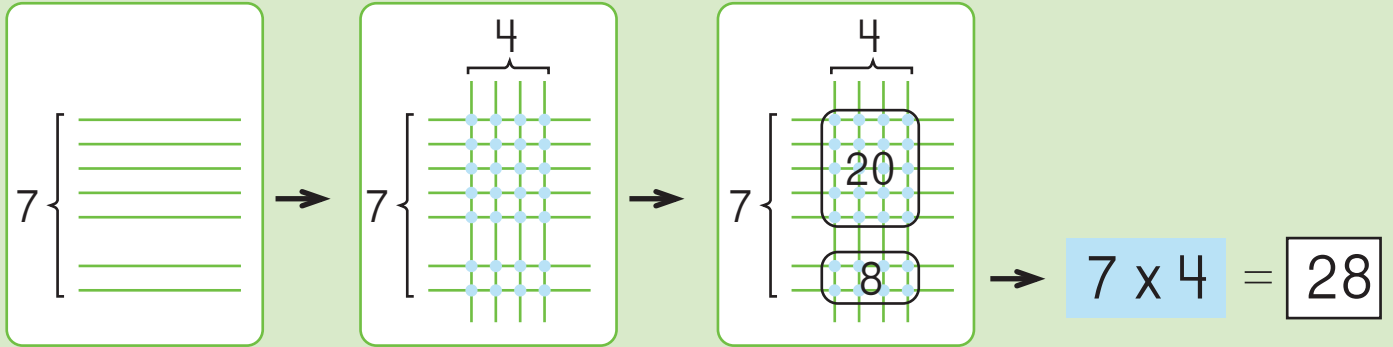


Z



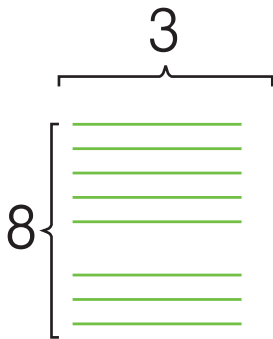
	R	S	T	U	V	W	X	Y	Z
 Lines	4	2	3	3	6	0	5	2	4
 Lines	3	5	4	3	2	5	2	6	4
	12	10	12	9	12	0	10	12	16

Example: $7 \times 4 = \square$



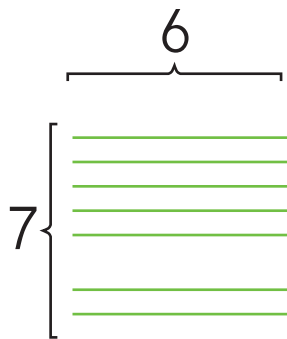
A.

$8 \times 3 = \square$



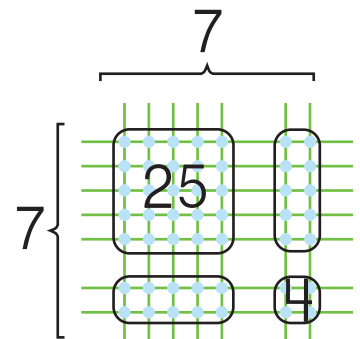
B.

$7 \times 6 = \square$



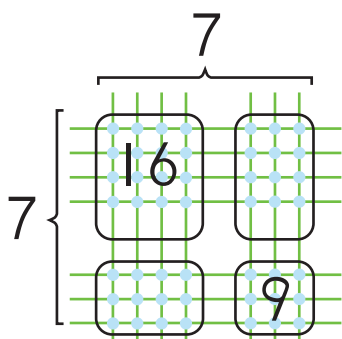
C.

$\square \times \square = \square$



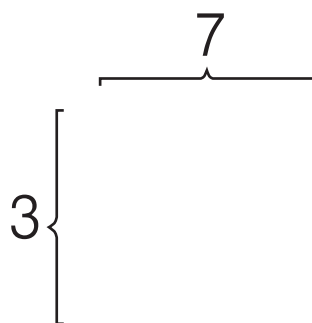
D.

$\square \times \square = \square$



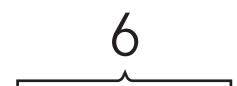
E.

$3 \times 7 = \square$

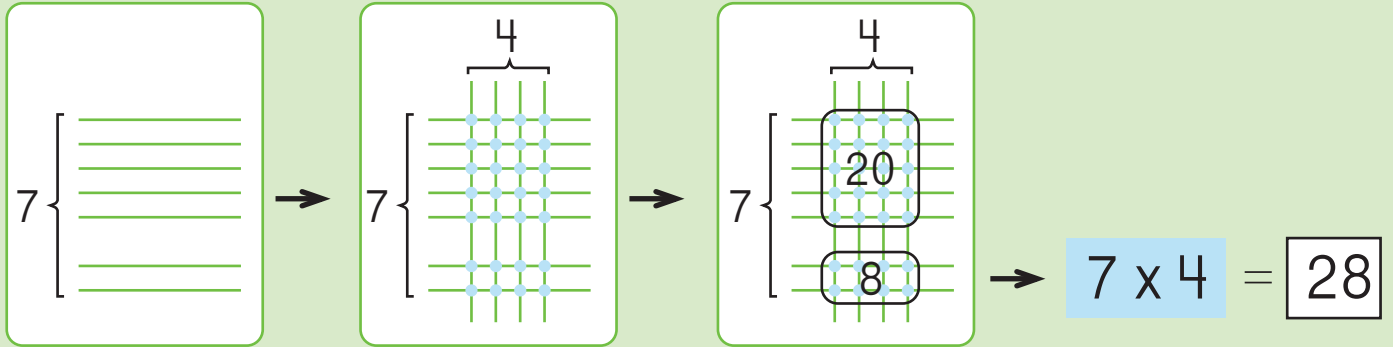


F.

$5 \times 6 = \square$

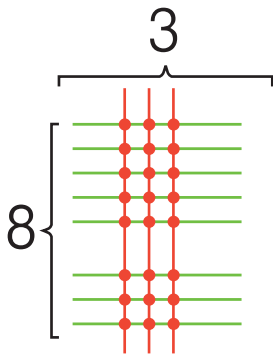


Example: $7 \times 4 = \square$



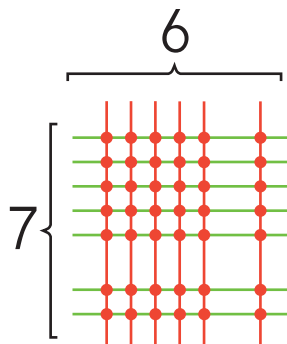
A.

$8 \times 3 = 24$



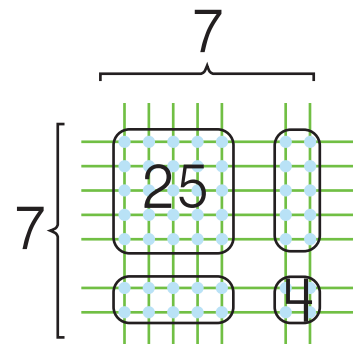
B.

$7 \times 6 = 42$



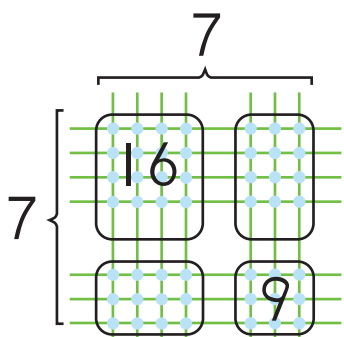
C.

$7 \times 7 = 49$



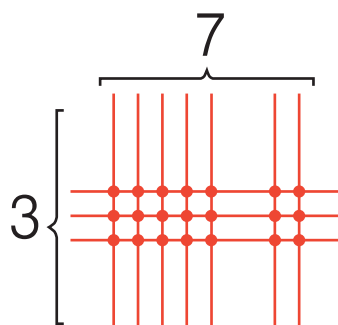
D.

$7 \times 7 = 49$



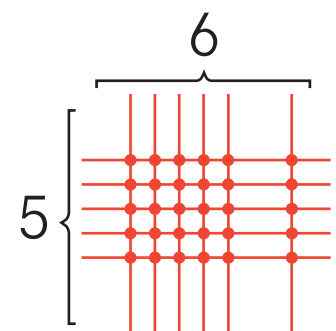
E.

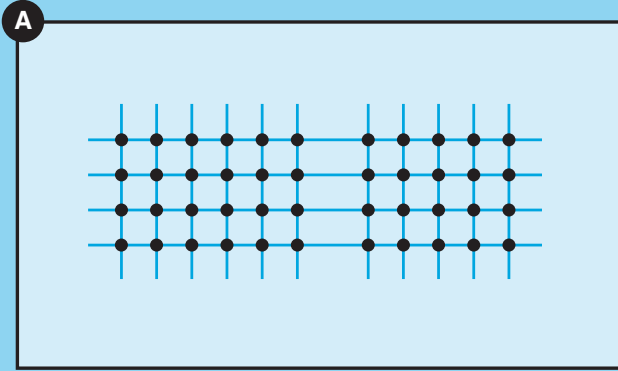
$3 \times 7 = 21$



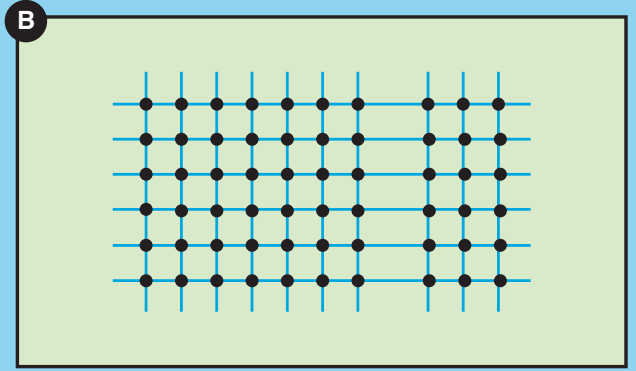
F.

$5 \times 6 = 30$

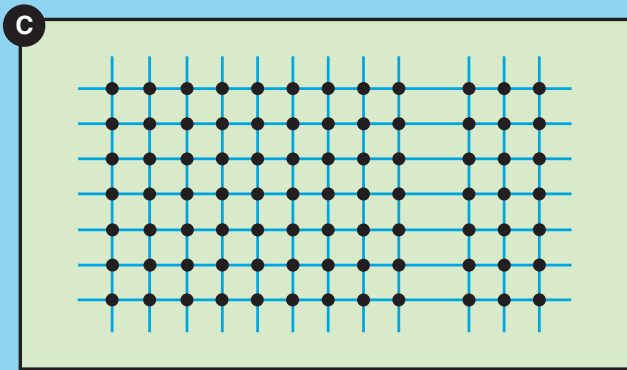




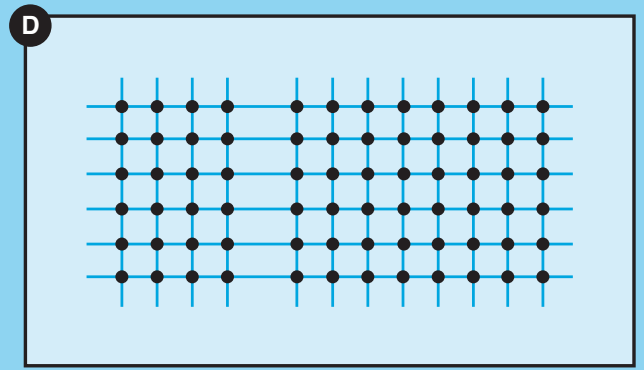
6	5	11
x 4	x 4	x 4



7		
x 6	x 6	x 6



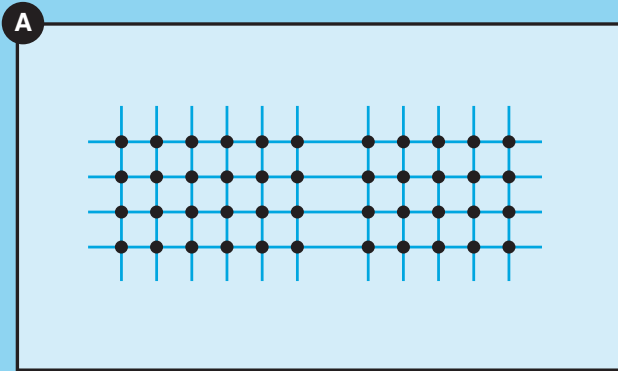
9		
x 7	x 7	x 7



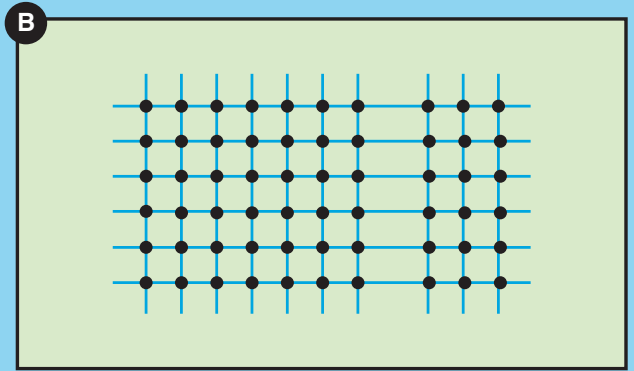
4		
x 6	x 6	x 6



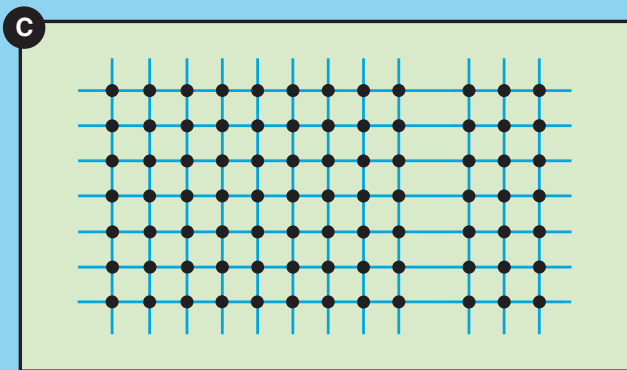
8 half-dollars		12 half-dollars	
8 quarters		12 quarters	
8 dimes		12 dimes	
8 nickels		12 nickels	
8 of each		12 of each	



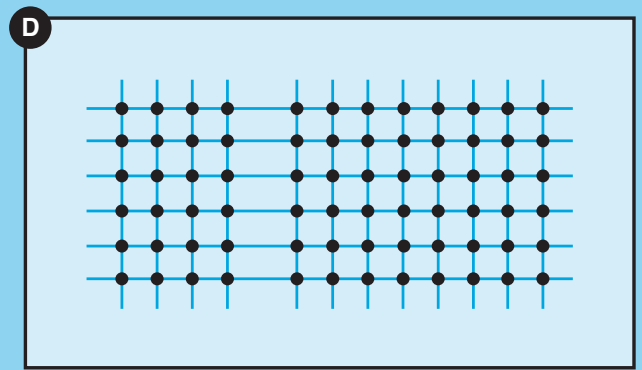
6	5	11
x 4	x 4	x 4
24	20	44



7	3	10
x 6	x 6	x 6
42	18	60



9	3	12
x 7	x 7	x 7
63	21	84



4	8	12
x 6	x 6	x 6
24	48	72



8 half-dollars	\$4.00	12 half-dollars	\$6.00
8 quarters	\$2.00	12 quarters	\$3.00
8 dimes	80¢	12 dimes	\$1.20
8 nickels	40¢	12 nickels	60¢
8 of each	\$7.20	12 of each	\$10.80

Name: _____

Date: _____

(A)

$27 \times 16 = \underline{\quad}$

	20	7	27
6	120	42	162
10	200	70	
16	220	112	

27×6

27×10

27×16

		2	7
	x	1	6
<hr/>			
		1	6
<hr/>			

(B)

$31 \times 29 = \underline{\quad}$

	30	1	31
9			
20			

$31 \times \underline{\quad}$

$\underline{\quad} \times \underline{\quad}$

$\underline{\quad} \times \underline{\quad}$

		3	1
	x	2	9
<hr/>			
<hr/>			

(C)

$32 \times 13 = \underline{\quad}$

	32
3	96
10	
13	

32×3

$32 \times \underline{\quad}$

$32 \times \underline{\quad}$

	3	2
x	1	3
<hr/>		
<hr/>		

(D)

$94 \times 14 = \underline{\quad}$

94×4

$94 \times \underline{\quad}$

$94 \times \underline{\quad}$

		9	4
	x	1	4
<hr/>			
<hr/>			

Name: _____

Date: _____

(A)

$$27 \times 16 = \underline{432}$$

	20	7	27
6	120	42	162
10	200	70	270
16	220	112	432

27×6

27×10

27×16

		2	7
	x	1	6
<hr/>			
		1	6
		2	7
		4	3
		2	

(B)

$$31 \times 29 = \underline{899}$$

	30	1	31
9	270	9	279
20	600	20	620
29	870	29	899

31×9

31×20

31×29

		3	1
	x	2	9
<hr/>			
		2	7
		6	2
		8	9
		9	

(C)

$$32 \times 13 = \underline{416}$$

	32
3	96
10	300
13	416

32×3

32×10

32×13

	3	2
x	1	3
<hr/>		
	9	6
	3	0
	4	1
	6	

(D)

$$94 \times 14 = \underline{1,316}$$

94×4

94×10

94×14

		9	4
	x	1	4
<hr/>			
		3	7
		9	4
		1	3
		1	6