Multiply 2-digits by 1-digit

1 Brett uses a place value chart to work out 5 × 32

Hundreds	Tens	Ones
	10 10 10	1 1
	10 10 10	1 1
	10 10 10	1 1
	10 10 10	1 1
	10 10 10	1 1

100 10

Talk about Brett's method with a partner.

Complete the multiplication.

5 × 32 = 160

Use Brett's method to work out 6 × 34

6 × 34 = 204

2 Rosie works out 4 × 37 using a written method.

		H	T	O						
			3	7						
	×			4						
			2	8			(7	x	4)	
		1	2	0		(3	0	x	4)	
		1	4	8						

Talk about Rosie's method with a partner.

Use Rosie's method to work out 6 × 28

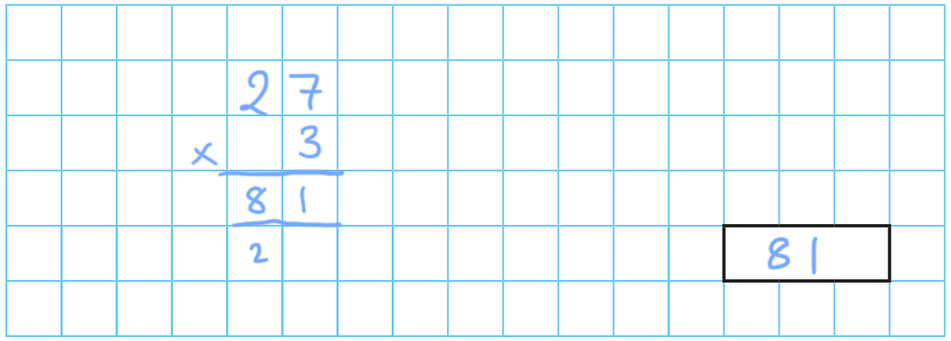
28
× 6
48 (8 × 6)
120 (20 × 6)
168
168

3 Dani uses a different written method to work out 8 × 42

		H	T	O	
			4	2	
	×			8	
		3	3	6	
			1		

Talk about Dani's method with a partner.

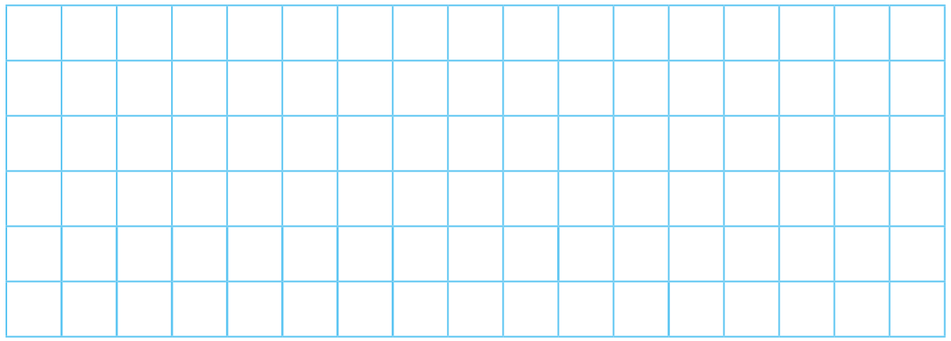
Use Dani's method to work out 3 × 27



4 Use a written method to complete the multiplications.

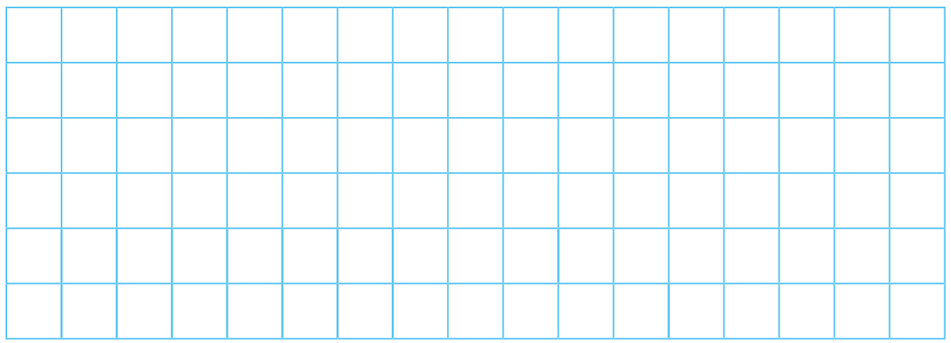
a) 38 × 6 = 228

c) 45 × 9 = 405



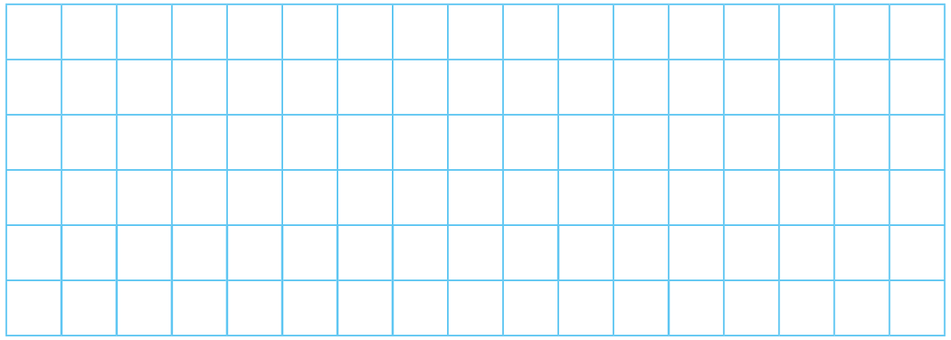
b) 71 × 3 = 213

d) 52 × 5 = 260



e) 29 × 8 = 232

f) 17 × 4 = 68



5 Class 4 is selling tickets for a play.

Tickets cost £5 per person.

56 tickets have been sold so far.

How much money has Class 4 collected?

£280

6 Rosie buys 8 bunches of flowers. Each bunch has 17 flowers.
How many flowers does she have altogether?

136

Multiply 3-digits by 1-digit

1 Filip uses a place value chart to help him multiply a 3-digit number by a 1-digit number.

Hundreds	Tens	Ones
100	10 10	1 1 1 1
100	10 10	1 1 1 1
100	10 10	1 1 1 1

a) What multiplication is Filip working out?

124 × 3

b) What is the answer to Filip's multiplication? 372

2 Use place value counters to complete the multiplications.

a) 3 × 213 = 639

b) 4 × 216 = 864

c) 5 × 106 = 530

d) 6 × 106 = 636

e) 4 × 209 = 836

f) 317 × 3 = 951

3 Complete the multiplication.

Use the place value chart to help you.

H	T	O
100 100	10	1 1 1 1 1
100 100	10	1 1 1 1 1
100 100	10	1 1 1 1 1

	H	T	O
	2	1	5
×			3
	6	4	5
		1	

4 Complete the multiplications.

a)

	H	T	O
	2	1	7
×			4
	8	6	8
		2	

b)

	H	T	O
	4	3	9
×			2
	8	7	8
		1	

c)

	H	T	O
	1	0	8
×			6
	6	4	8
		4	

d) 163 × 5

	H	T	O
	1	6	3
×			5
	8	1	5
	3	1	

e) 3 × 240

		H	T	O	
		2	4	0	
×				3	
		7	2	0	
		1			

f) 7 × 131

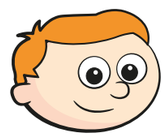
		H	T	O	
		1	3	1	
×				7	
		9	1	7	
		2			

5 A lorry driver travels 156 km per day.

How many kilometres will the lorry driver have travelled after 3 days?

468km

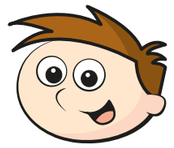
6 Ron and Teddy are working out 5 × 245



I know the answer will be greater than 1,000 because I know 5 × 200 is 1,000

Ron

I know the answer should end in 5 because I know 5 × 5 is 25



Teddy

a) Who is correct? Circle your answer.

Ron **Teddy** **both** **neither**

b) Use a written method to work out 5 × 245

1,225

7 There are 7 year groups in a school.

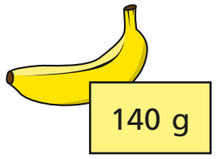
There are 112 children in each year group.

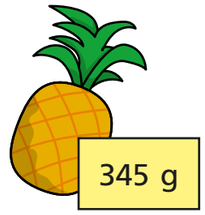
How many children are there in the whole school?

784

8 A banana weighs 140 g

A pineapple weighs 345 g





Bag **A** contains 8 bananas and bag **B** contains 3 pineapples.

Which bag weighs more and by how much?

Show your working.

Bag A weighs 85 g more than bag B.

Multiply 4-digits by 1-digit

1 Complete the sentences to describe the multiplication.

Th	H	T	O
1,000 1,000	100 100	10	1 1 1
1,000 1,000	100 100	10	1 1 1
1,000 1,000	100 100	10	1 1 1

There are [9] ones altogether.

There are [3] tens altogether.

There are [6] hundreds altogether.

There are [6] thousands altogether.

2,213 × 3 = [6,639]

2 Complete the multiplication.

Use the place value chart to help you.

Th	H	T	O
00	0		00
00	0		00
00	0		00
00	0		00

		2	1	0	2	
	×				4	
		8	4	0	8	

3 A football stadium holds 2,214 people.

The stadium is full for 4 matches in a row.

What was the attendance for all 4 matches?

Th	H	T	O
1,000 1,000	100 100	10	1 1 1 1
1,000 1,000	100 100	10	1 1 1 1
1,000 1,000	100 100	10	1 1 1 1
1,000 1,000	100 100	10	1 1 1 1

		2	2	1	4	
	×				4	
		8	8	5	6	
				1		

The attendance for all 4 matches was [8,856]

4 Nijah is calculating 2,430 × 3

She makes this place value chart to help her.

Th	H	T	O
	100 100	10 10 10 10	1 1 1
	100 100	10 10 10 10	1 1 1
	100 100	10 10 10 10	1 1 1

She gets the answer 729

What mistake has Nijah made?

[She hasn't put her counters in the correct columns.]

What is the correct answer? [7,290]

5 Complete the multiplications.

a) 3,126 × 3 = 9,378

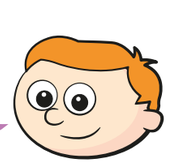
c) 4,132 × 6 = 24,792

b) 4,812 × 2 = 9,624

d) 1,502 × 5 = 7,510

6 Ron is working out 7,423 × 0

$$\begin{array}{r} 7\ 4\ 2\ 3 \\ \times\qquad 0 \\ \hline 7\ 4\ 2\ 3 \end{array}$$



Do you agree with Ron? No

Did Ron have to use a column method? Is there a quicker way?

7 Work out these multiplications.

2,846 × 2 = 5,692

2,846 × 4 = 11,384

2,846 × 8 = 22,768

What do you notice about the answers?

8

248 × 10 = 2,480

Without using the formal method, how could you use this fact to calculate 248 × 9?

248 × 9 = 248 × 10 − 248 × 1 = 2,480 − 248, = 2,232

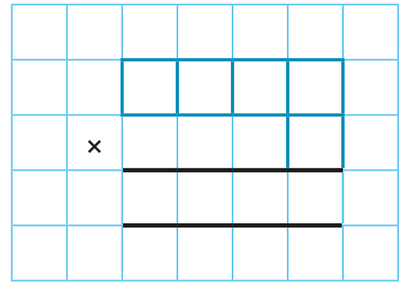
Check your answer using the formal method.

$$\begin{array}{r} 2\ 4\ 8 \\ \times\qquad 9 \\ \hline 2\ 2\ 3\ 2 \\ {\scriptstyle 4\ \ 7} \end{array}$$

Which method was easier?

9 Use each digit card once to write a multiplication.

1	2	3	4	5



How many different products can you find?

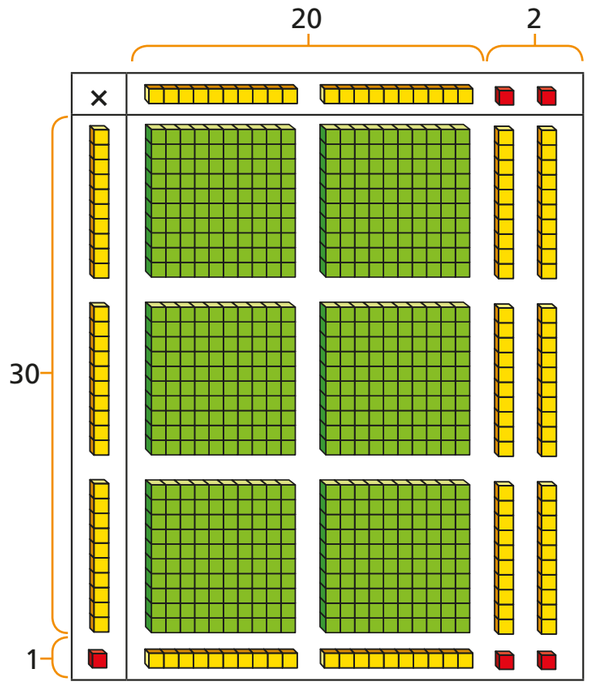
Various answers.

What is the closest product to 8,000? 8,270

Multiply 2-digits (area model)

1 Kim is using base 10 to work out 31 × 22

Use Kim's model to help you complete the sentences.



There are [2] ones altogether.

There are [8] tens altogether.

There are [6] hundreds altogether.

31 × 22 = [682]

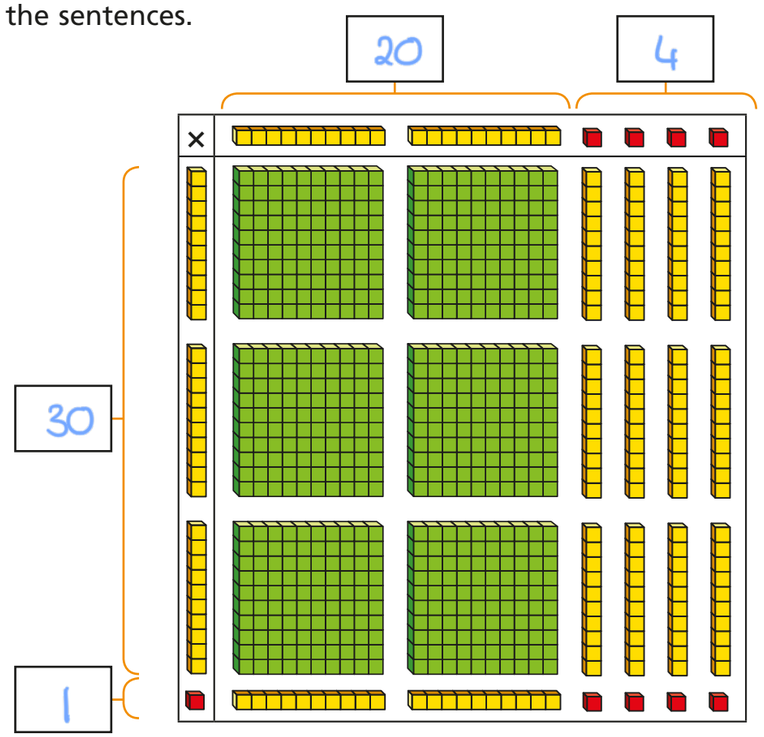
2 Use base 10 to work out the multiplications.

a) 12 × 14 = [168]

b) 23 × 13 = [299]

3 Amir is using base 10 to calculate 31 × 24

a) Add the missing information to the area model and complete the sentences.



There are [4] ones altogether.

There are [14] tens altogether.

There are [6] hundreds altogether.

b) Describe any exchanges you need to make.

[Exchange 10 tens for 1 hundred.]

c) Complete the multiplication.

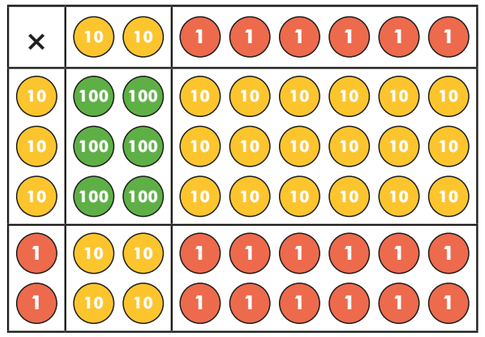
31 × 24 = [744]

4 Use base 10 to work out these multiplications.

a) 25 × 15 = [375]

b) 36 × 12 = [432]

5 Use the place value counters to complete the multiplication grid and sentence.



×	20	6
30	600	180
2	40	12

26 × 32 = 832

6 Use an area model to help you complete the multiplication.

a) 28 × 14 = 392

×	20	8
10	200	80
4	80	32

b) 27 × 16 = 432

c) 35 × 22 = 770

d) 45 × 36 = 1,620

×	20	7
10	200	70
6	120	42

7 Complete the multiplications.

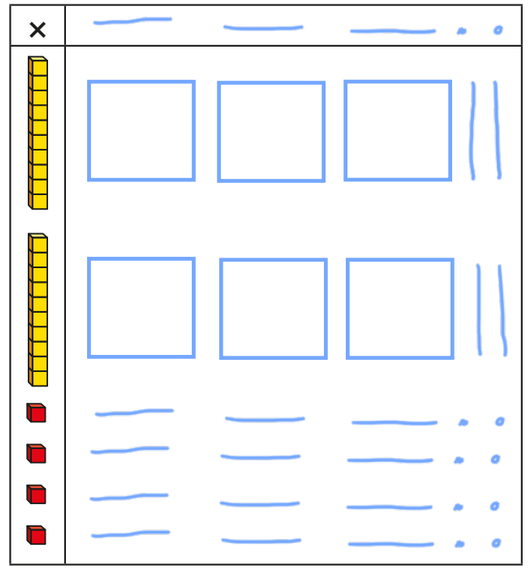
21 × 24 = 504

31 × 25 = 775

18 × 26 = 468

8 24 × 32 = 768

Complete the area model to find the missing number.



9 Use each digit card once to write a multiplication.

2 **3** **4** **5**

e.g. 23 × 45 = 1,035

How many different answers can you find?

Various answers

How many products are there between 1,000 and 1,500?

Multiply 2-digits by 2-digits

1 Complete the multiplications.

a) 6 × 6 = 36

6 × 60 = 360

b) 12 × 8 = 96

12 × 80 = 960

c) 32 × 3 = 96

32 × 30 = 960

d) 7 × 9 = 63

7 × 90 = 630

e) 21 × 4 = 84

21 × 40 = 840

f) 48 × 3 = 144

48 × 30 = 1,440

How did you work out your answers?

2 Fill in the missing numbers.

a)

			4	3	
	×		1	3	
		1_1	2	9	
		4	3	0	
		5	5	9	

(43 × 3)

(43 × 10)

b)

			2	1	
	×		1	6	
		1_1	2	6	
		2	1	0	
		3	3	6	

(21 × 6)

(21 × 10)

c)

			2	1	
	×		2	5	
		1	0	5	
		4	2	0	
		5	2	5	

(21 × 5)

(21 × 20)

3 Mo is calculating 34 × 23

Here is his working.

$$\begin{array}{r} 34 \\ \times\ 23 \\ \hline 102 \\ 68 \\ \hline 170 \end{array}$$

What mistake has Mo made?

What is the correct answer?

You may use the blank grid for your workings.

		3	4		
×		2	3		
	1	0	2		
	6	8	0		
	7	8	2		

4 Work out the multiplications.

a) 52 × 34 = 1,768

c) 46 × 64 = 2,944

b) 22 × 56 = 1,232

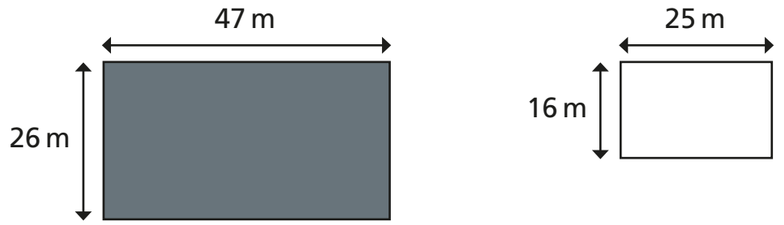
d) 47 × 63 = 2,961

5 A machine prints 92 labels every minute.

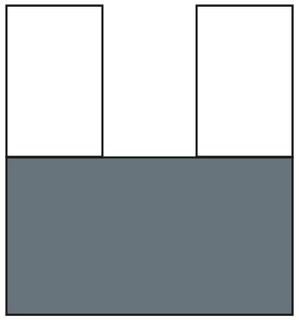
How many labels will it print in three-quarters of an hour?

4,140

6 Here are two rectangles.

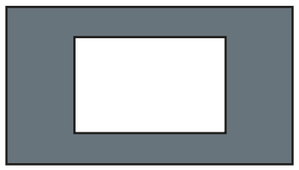


a) What is the area of this compound shape?



2,022 m²

b) What is the area of the shaded part?



822 m²

Compare methods and answers with a partner.
What is the same and what is different?

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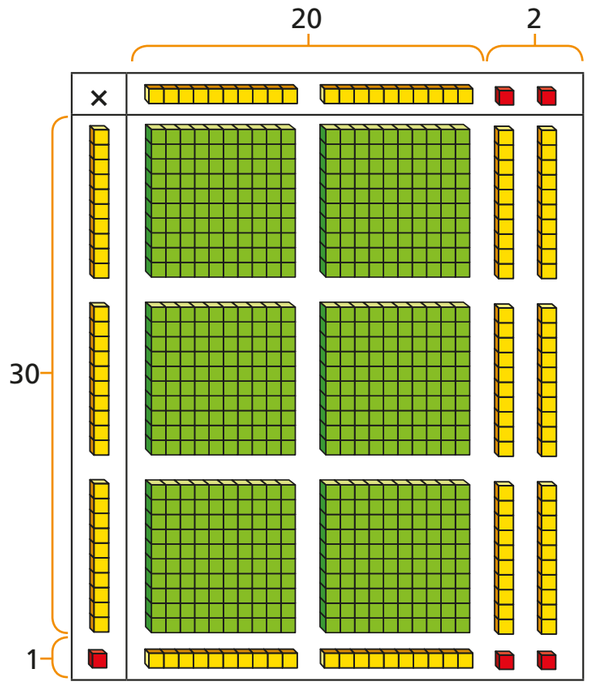

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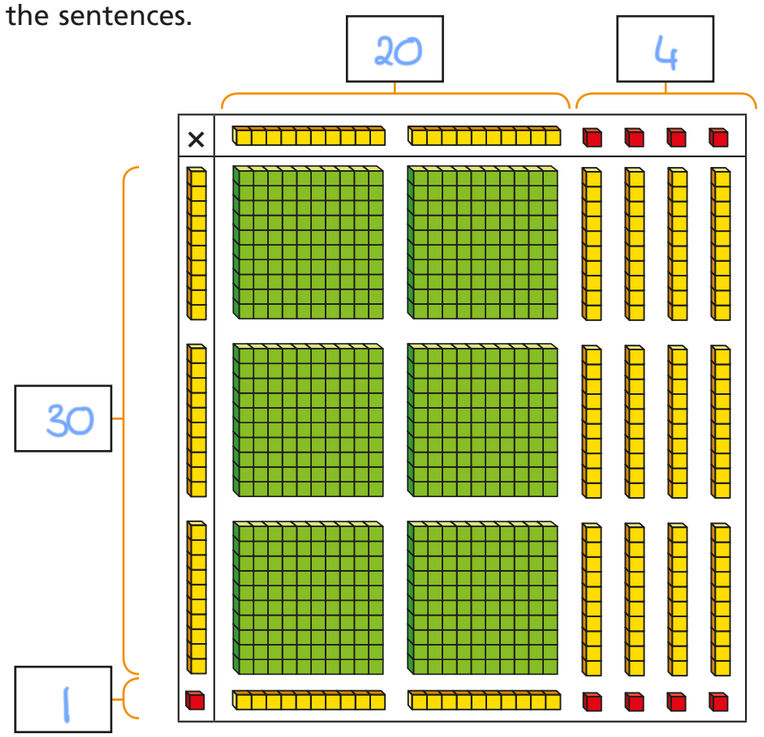

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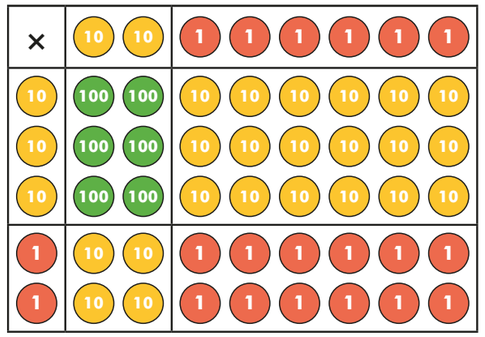

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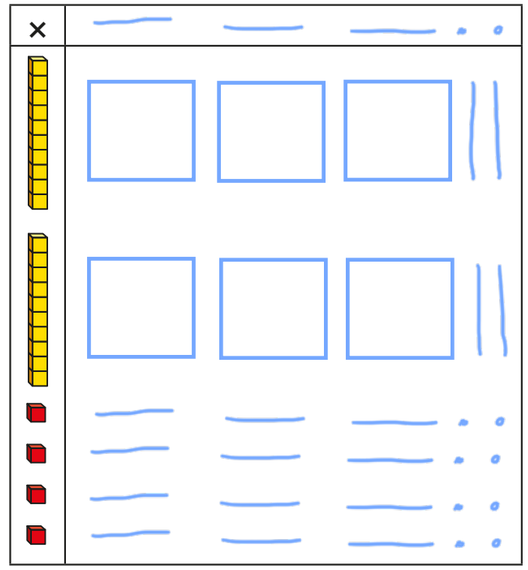

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