4.10.21

What is the largest product you can make?

4 The length of four rivers is shown in the table.

River	Length in km
Mississippi	6,275
Saint Lawrence	3,058
Nile	6,853
Rio Grande	3,057

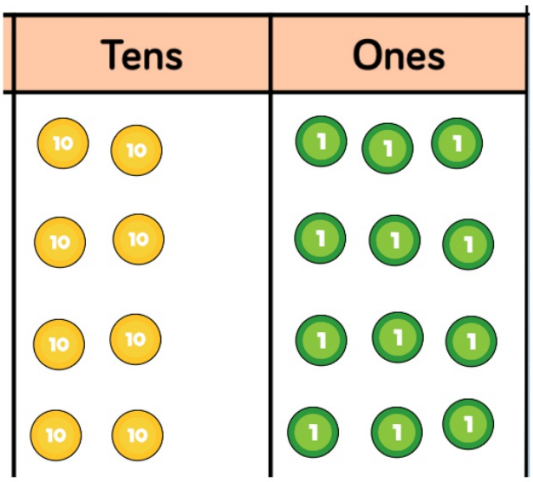
Put the rivers in order of their length starting with the shortest.

Round the length of the Mississippi river to the nearest 100 km.

What do you know about multiplication?

How would you multiply this

$23 \times 4 =$

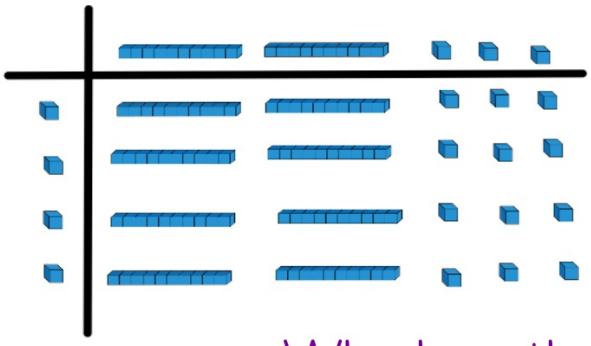


$$\begin{array}{r} 2\ 3 \\ \times\ 4 \\ \hline 9\ 2 \\ 1 \end{array}$$

$23 \times 4 = 92$

$20 \times 4 = 80$

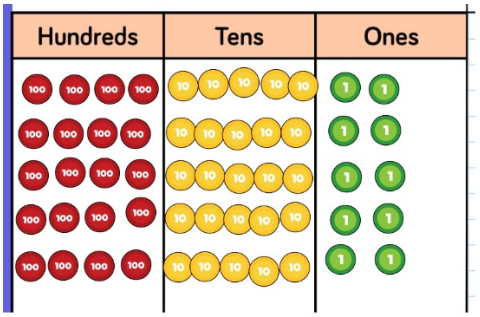
$3 \times 4 = 12$



	20	3
4	80	12

Which is the most efficient method?

How would you calculate 452 × 5 = ?



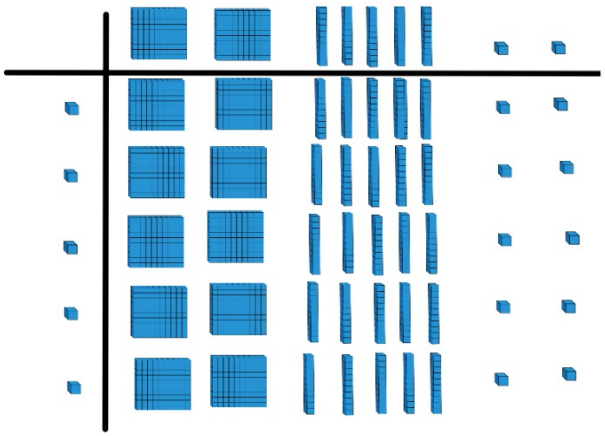
$$\begin{array}{r} 452 \\ \times \quad 5 \\ \hline 2260 \\ 21 \end{array}$$

$452 \times 5 =$

$400 \times 5 = 2000$

$50 \times 5 = 250$

$2 \times 5 = 10$



	200	50	2
5	1000	250	10

5632 × 4 =

Model

Calculation

$4502 \times 3 =$

Model

Calculation

Now try these drawing a model using place value counters:

6523 × 5 =

7608 × 4 =

Task

You have 5 digits 1,2,3,4,5.

Use these to make a 4 digit multiplied by 1 digit calculation.

1) What is the largest product you can make?

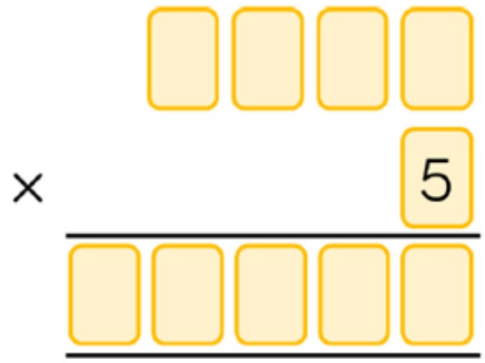
2) What is the smallest product you can make?

3) Can you make an odd/even product?

4) Use a model to show your calculation

Challenge

Can you work out the missing numbers using the clues?



- The 4 digits being multiplied by 5 are consecutive numbers.
- The first 2 digits of the product are the same.
- The fourth and fifth digits of the answer add to make the third.

Plenary

Alex calculated 1,432 × 4

Here is her answer.

	Th	H	T	O
	1	4	3	2
×				4
	4	16	12	8

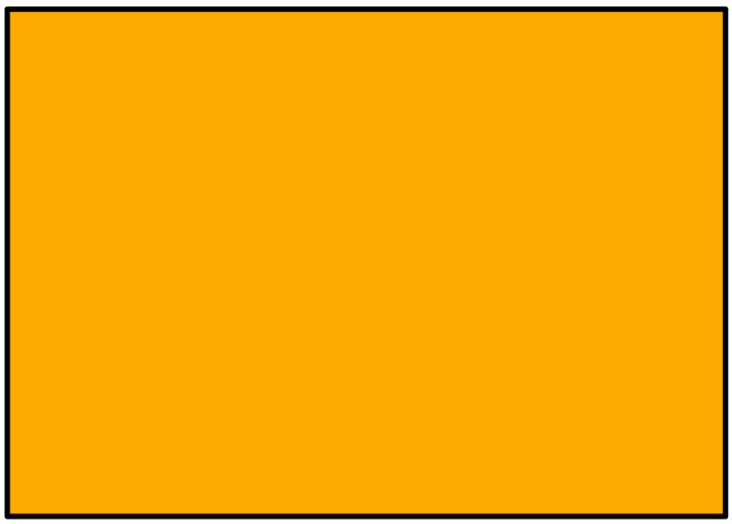
1,432 × 4 = 416,128

Can you explain what Alex has done wrong?

5.10.21

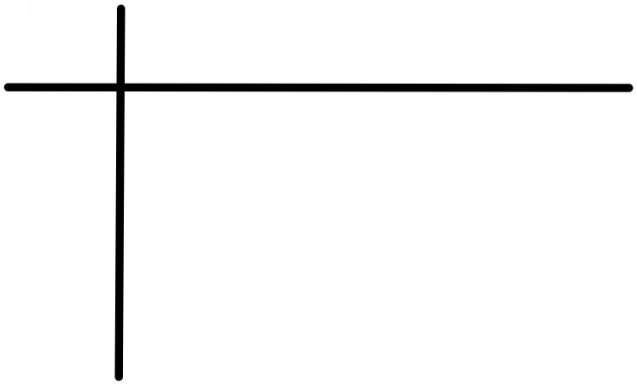
Can you use the area model to multiply?

What is the area model?

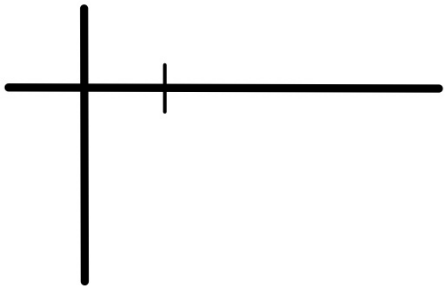


123 × 4 =

Model

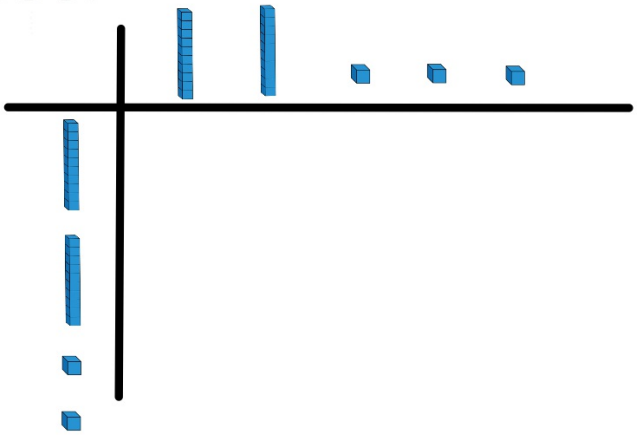


Calculation



23 × 22 =

Model

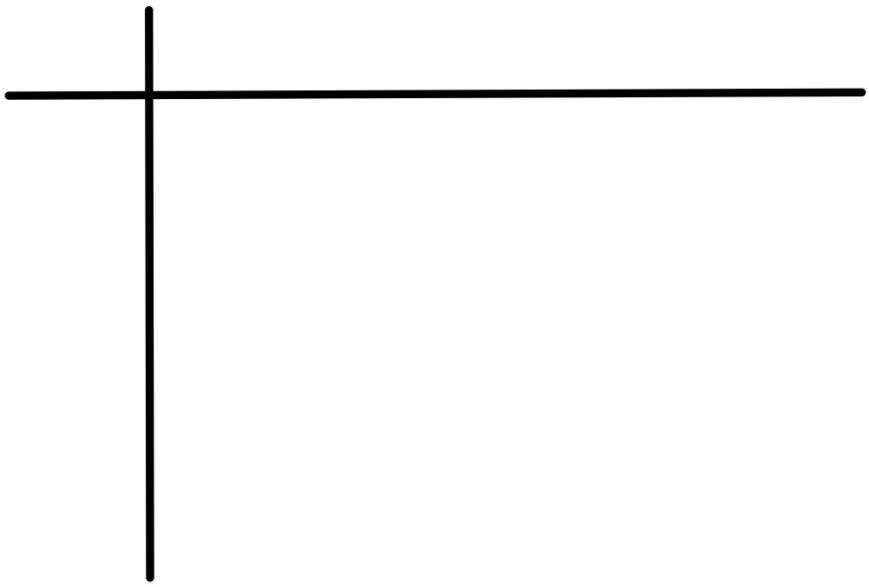


Calculation

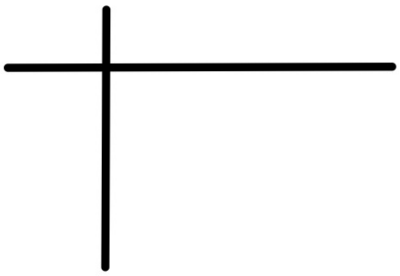
	20	3
20		
3		

$32 \times 24 =$

Model



Calculation



Use the area model to caculate:

25 × 32 =

35 × 32 =

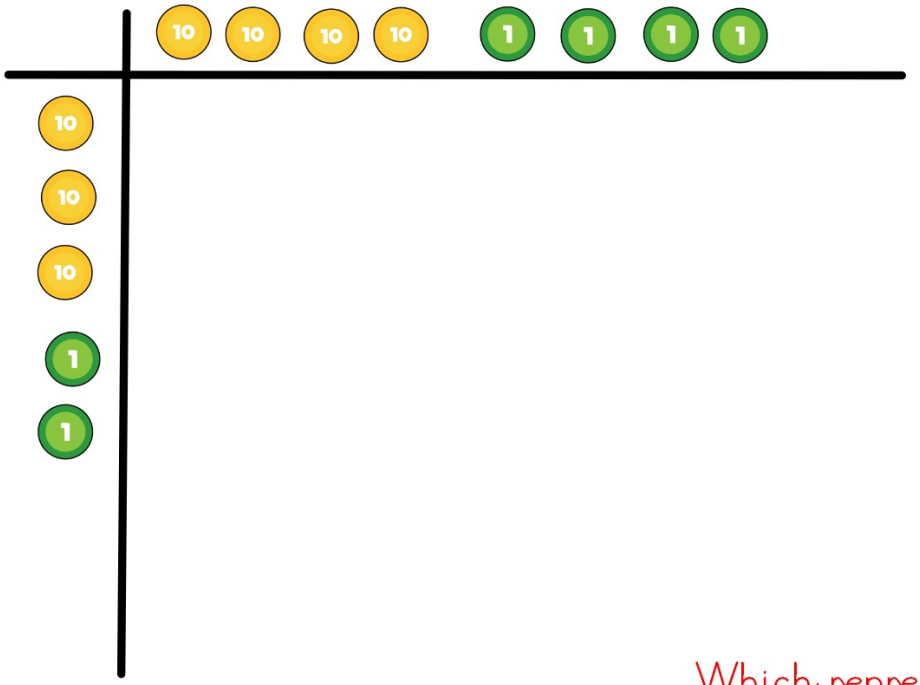
532 × 4 =

323 × 3 =

What do you think about this method?

44 × 32 =

Model



Calculation

Which representation do you prefer?

Calculate the following using place value counters in the area model:

52 × 24 =

34 × 43 =

362 × 4 =

241 × 3 =

Task

Use area model to prove

True or false?

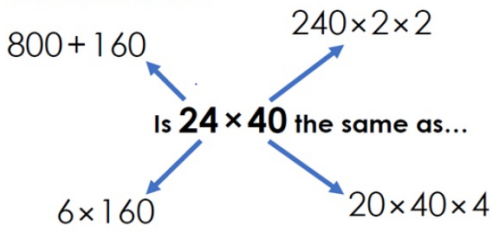
$17 \times 13 = 15 \times 15$

What do you notice?

Try other examples. Do you see a pattern?

Challenge

Is it the same?

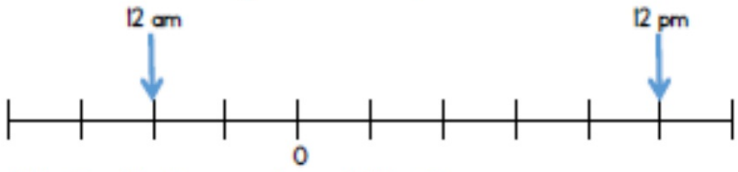


6.10.21

Can you estimate to check you calculation?

5 The number line shows the temperature at 12 am and 12 pm on Monday in a town.

The difference between the temperatures is 14°C.



What is the temperature at 12pm?

What have you found tricky about multiplying so far?

What do you need to remember?

How would you estimate what the product will be?

$423 \times 4 =$

$132 \times 14 =$

Estimate the product and then caculate:

637 × 24 =

573 × 28 =

573 × 82 =

637 × 6 =

534 × 4 =

459 × 8 =

Challenge

I know… so…

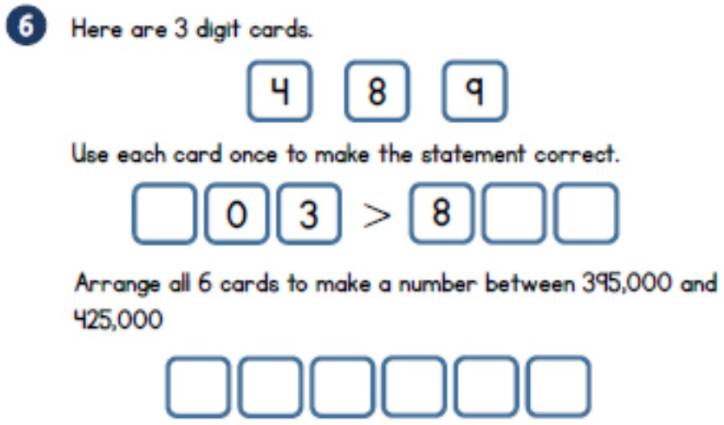
$25 \times 48 =$ _____

$100 \times 48 = 4800$

____ $\times 48 = 4848$

7.10.21

Which method will you use?



A swimming team swim 1,235 lengths of a pool each day. How many lengths of the pool do they swim in 21 days?

How would you solve this?

$$1235 \times 21 =$$

Model	Calculation

Would this method be more efficent?

Find out how many lengths we swam in one week

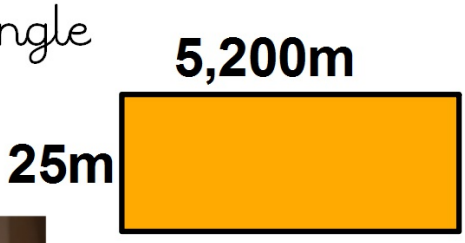
1235 × 7 =

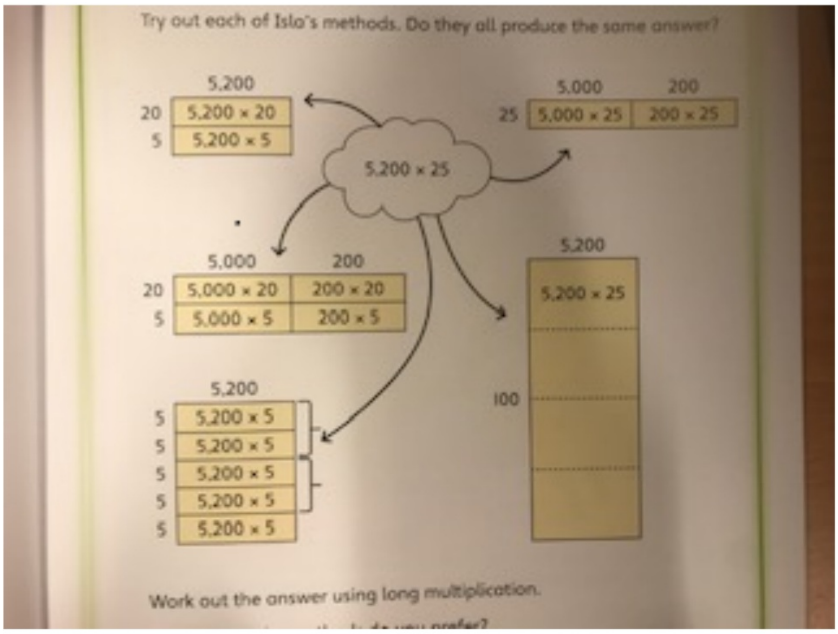
Then find out how many lengths in 21 days or 3 weeks.

The coach changes the training programme so the athletes train for 24 days. How many lengths will they swim now?

How could you use the previous calculation to help?

Isla is caculating the area of a rectangle





Task

Use column multiplcation first and then think of at least one other method to solve the following

3,125 × 15 =

5,123 × 13 =

5,056 × 14 =

Plenary

True or False?

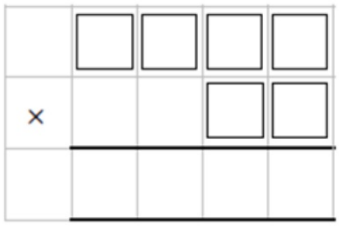
- $5{,}463 \times 18 = 18 \times 5{,}463$
- I can find the answer to $1{,}100 \times 28$ by calculating $1{,}100 \times 30$ and subtracting 2 lots of 1,100
- $702 \times 9 = 701 \times 10$

2.10.20

What is the product?

2	3	4	5	7	8

Place the digits in the boxes to make the largest product.



What is the largest product? Convince me

What is the smallest product? Convince me

What is the largest product you can make using consecutive numbers?

You can change 1 of the digits for a 0,1 or 9 which digit would you change to make a larger number? Why?

You can change 1 of the digits for a 0,1 or 9 which digit would you change to make a larger number? Why?

Write a word problem to go with 2 of your calculations

Plenary

Missing digits

$$
\begin{array}{r}
25\square \\
\times\ \square 7 \\
\hline
1771 \\
7590 \\
\hline
9361
\end{array}
$$