8.01.21

IALT: Efficient Multiplication and written methods

4 x 4 x 2

3 x 5 x 6

4 x 7 x 9

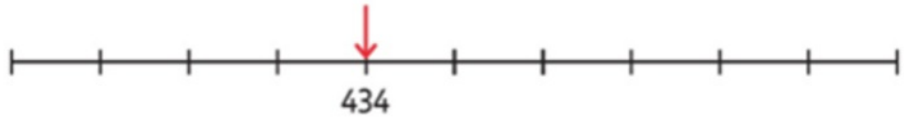
1 x 2 x 4

2 x 6 x 8

25% of 100

10% of 200

Challange



434 is between ☐ and ☐.

434 is closer to ☐ than ☐.

434 rounds to ☐ to the nearest 10.

https://www.topmarks.co.uk/maths-games/daily10

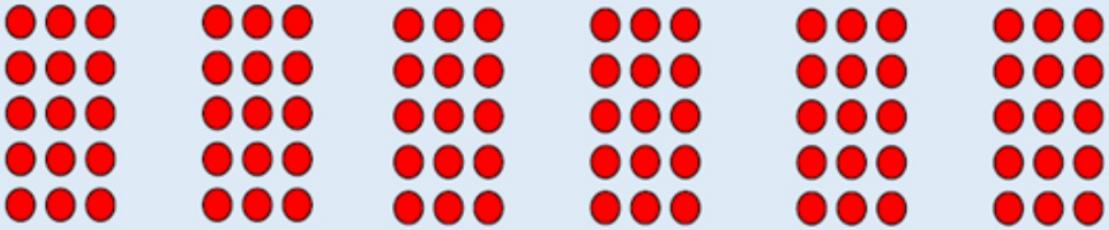
Daily Counting

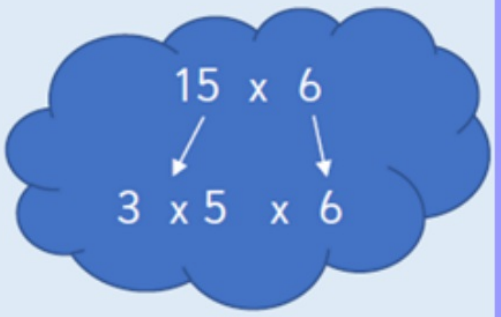
6

11

12

We can use our knowledge of factors to help us solve 15 x 6.





We have __ lots of __ x __

The question becomes 3 x 5 x 6

How could you use this to work out the answer?

How could you partition this?

We can use our knowledge of factors to help us solve 12 x 7.

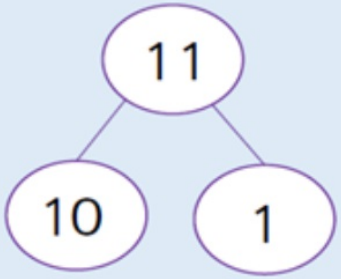
12 x 7

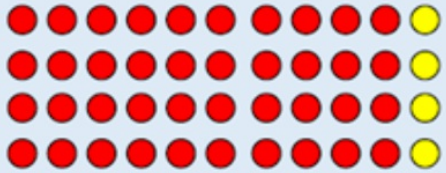
3 x 4 x 7

We have __ lots of __ x __

What knowledge can we use to work this out efficently?

11 x 4





10 x 4 1 x 4

Ten lots of 4 = _____ One lot of 4 = _____

Eleven lots of 4 = _____

11 x 4 = ____ x 4 + 4

____ x 4 + ____ x 4 = 11 x 4

Use this method to solve:

21 x 5 31 x 6 7 x 22

Can you work out the next part in your talking pairs?

11 x 2

Ten lots of 2 = __ One lot of 2 = __ Eleven lots of 2 = __

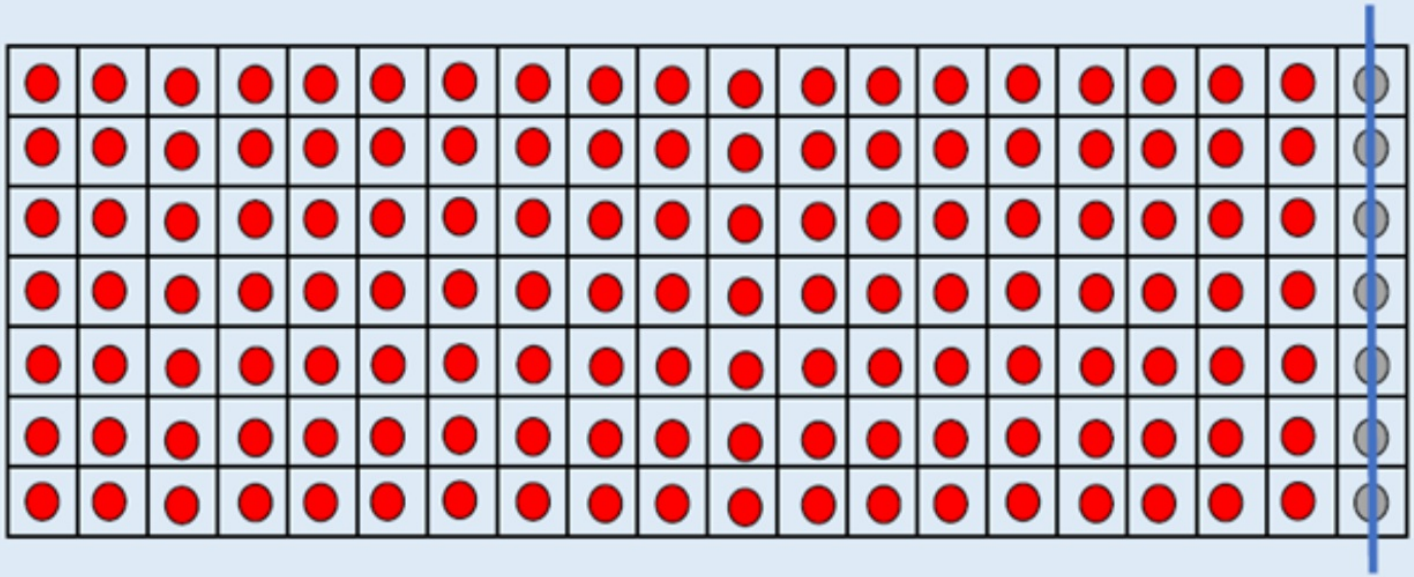
11 x 2 = __ = __ x 2 + 2

__ x 2 + __ x 2 = 11 x 2

Recap:

How do we break down the 11 xs table?

$$19 \times 7 = 20 \times 7 - 1 \times 7$$



Use this method to solve:

22×5

19×4

48×6

8×33

19 x 3 =

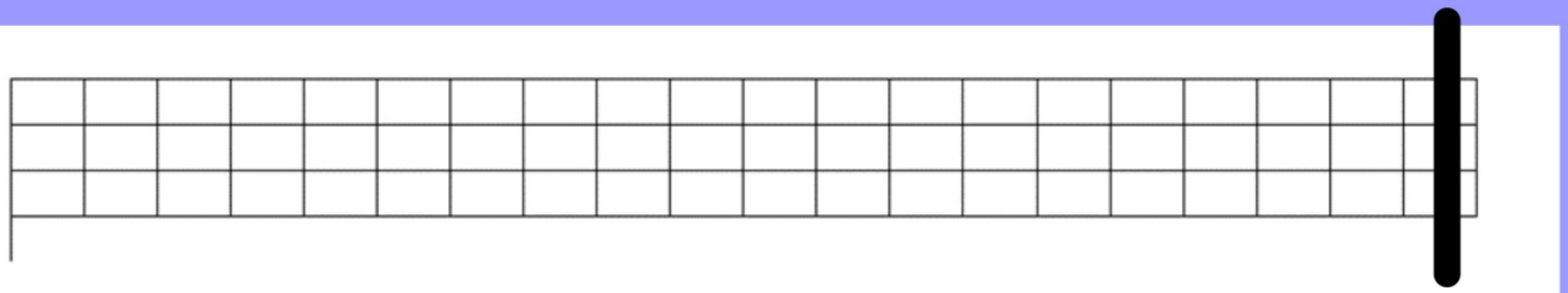
when we round 19 to the nearest 10 it becomes 20.

20 x 3 = 60

but we have to take 3 of the answer.

60 - 3 is 57.

19 x 3 = 57



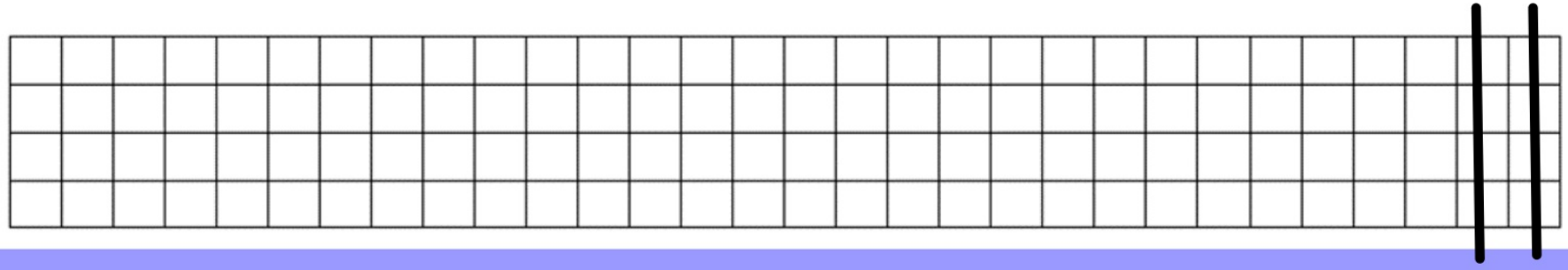
28 x 4 =

when we around 28 to the nearest 10 it becomes 30.

30 x 4 = 120

but we have to take 8 of the answer.

(2 x 4 = 8)



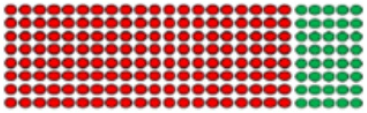
Mild:

Class 4 are calculating 25 × 8 mentally.
Can you complete the calculations in each of the methods?

Method 1

$25 \times 8 = 20 \times 8 + 5 \times 8$

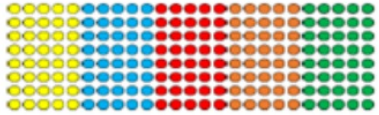
$= 160 + \square = \square$



Method 2

$25 \times 8 = 5 \times 5 \times 8$

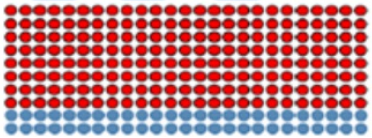
$= 5 \times \square = \square$



Method 3

$25 \times 8 = 25 \times 10 - 25 \times 2$

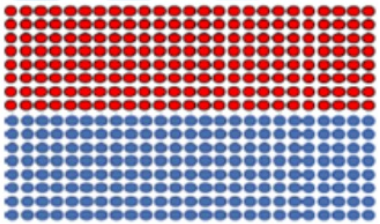
$= \square - \square = \square$



Method 4

$25 \times 8 = 50 \times 8 \div 2$

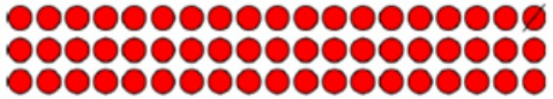
$= \square \div \square = \square$



Can you think of any other ways to mentally calculate 25 × 8?
Which do you think is the most efficient?
How would you calculate 228 × 5 mentally?

Spicy:

Teddy has calculated 19 × 3



$20 \times 3 = 60$
$60 - 1 = 59$
$19 \times 3 = 59$

Can you explain his mistake and correct the diagram?

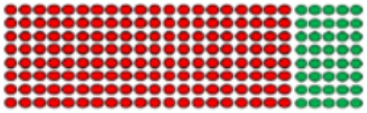
Answers:

Mild:

Class 4 are calculating 25 × 8 mentally.
Can you complete the calculations in each of the methods?

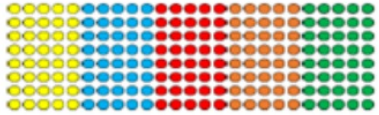
Method 1

$25 \times 8 = 20 \times 8 + 5 \times 8$
$= 160 + 40 = 200$



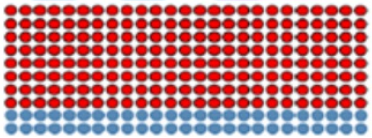
Method 2

$25 \times 8 = 5 \times 5 \times 8$
$= 5 \times 40 = 200$



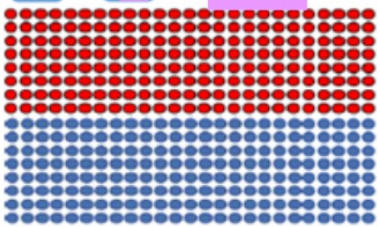
Method 3

$25 \times 8 = 25 \times 10 - 25 \times 2$
$= 250 - 50 = 200$



Method 4

$25 \times 8 = 50 \times 8 \div 2$
$= 400 \div 2 = 200$



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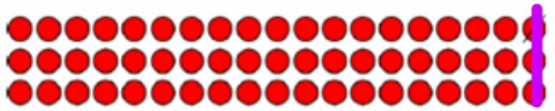
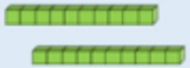
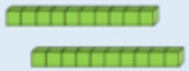


$20 \times 3 = 60$
$60 - 1 = 59$
$19 \times 3 = 59$

60 - 3 = 57

Can you explain his mistake and correct the diagram?

There are 22 cartons of drink in each box.
How many drinks are there in 3 boxes?

T	O
	
	
	

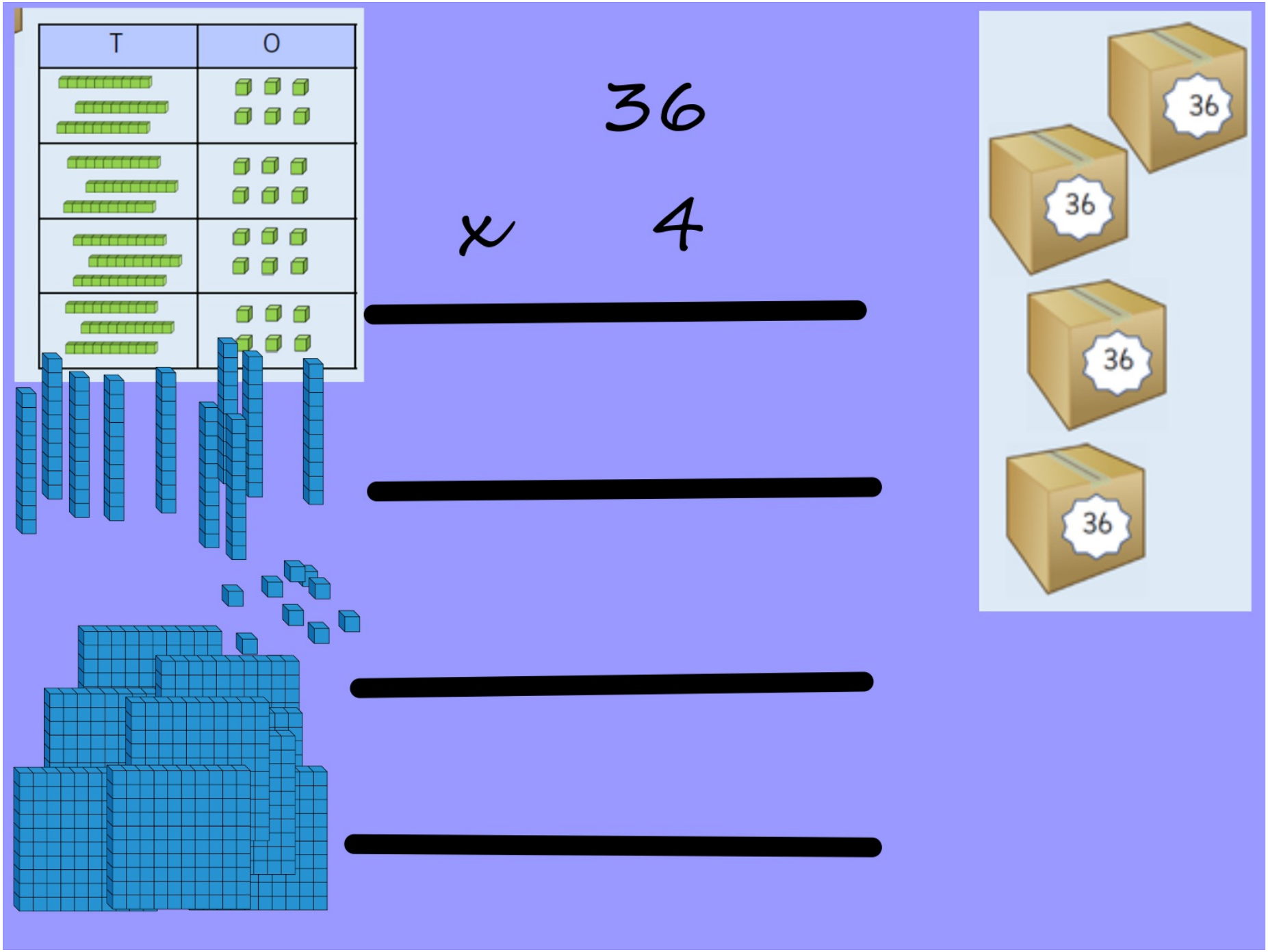
			T	O					
			2	2					
		x		3					
				6	(3	x	2)		
			6	0	(3	x	20)		
			6	6					

Use this method to solve:

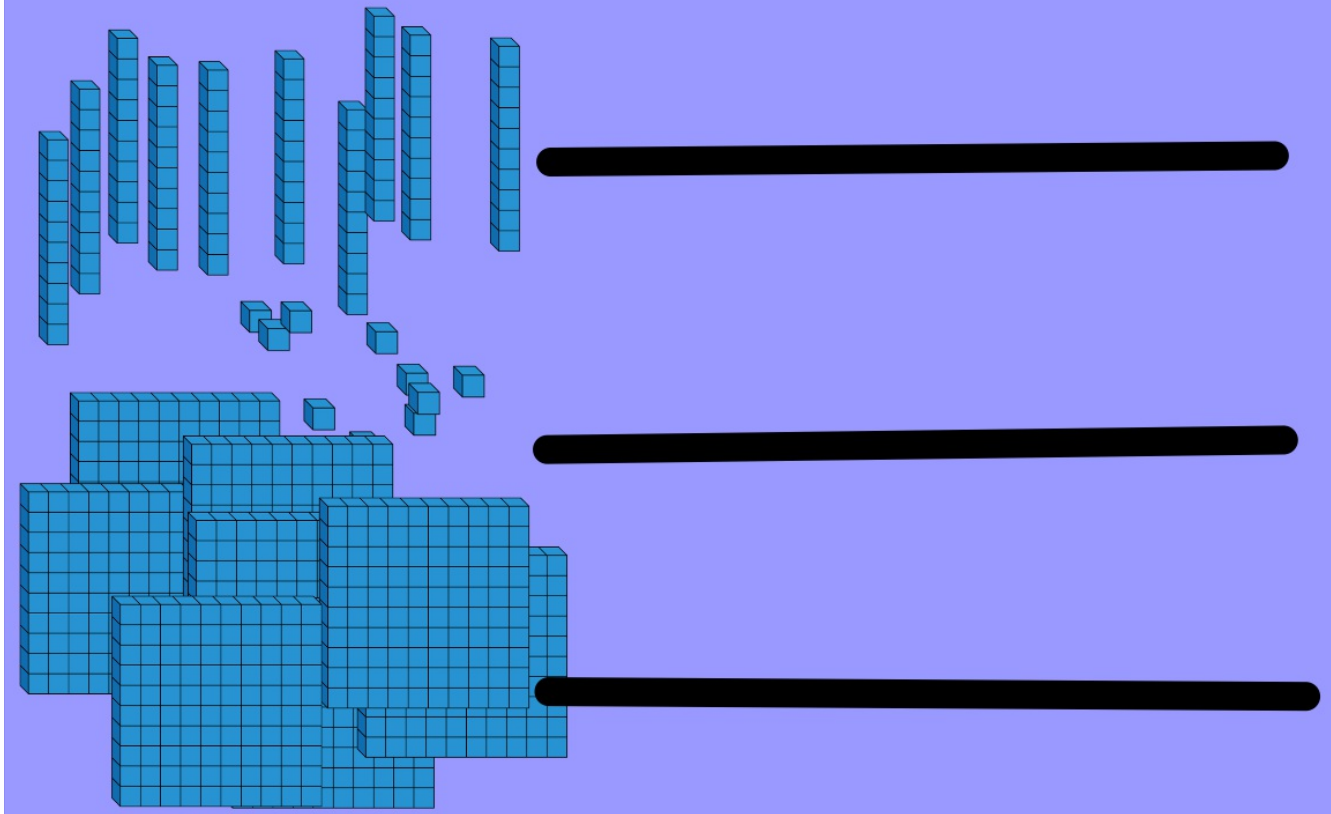
36 x 4

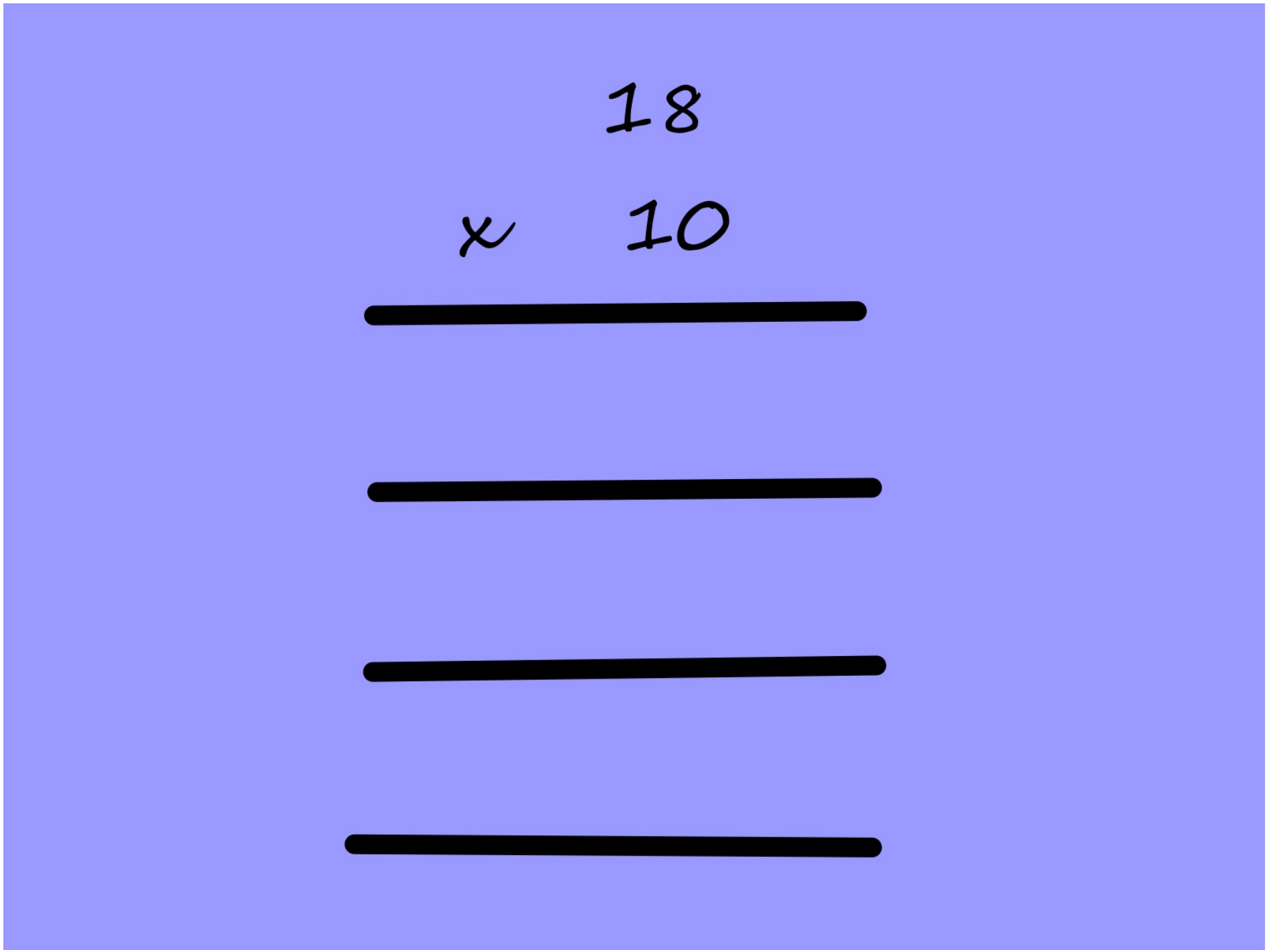
51 x 2

10 x 18


T
O
36
x 4
36
36
36

$$\begin{array}{r} 51 \\ \times \quad 2 \\ \hline \\ \hline \\ \hline \\ \hline \end{array}$$




18
x 10

PRACTICAL MATHS

Try drawing out dienes to help you solve the following questions:

13 x 4

20 x 7

35 x 6

10 x 5

46 x 7

23 x 4