





Steps to success

Lockdown work	
Date	11.1.21
Subject/s	Maths
Learning Objective 	To use an efficient method for multiplying.

SA 	TA 
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Success Criteria 	I know that there is more than one method for multiplying.		
	I can choose a method that is most efficient.		

Support	Independently	Support ()	Group work
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Pre-task:

Using skills that you have learnt before answer these questions:

1. $20 \times 6 =$

2. $32 \times 4 =$

3. $40 \times 7 =$

Fluency

Below is a calculation for you to answer using 4 different methods. Have a go at answering all of them (remember you should end up with the same answer each time)

Which method was best for you? Which did you find the most efficient?

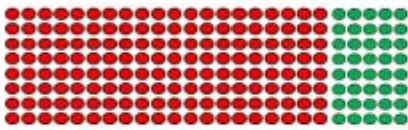
Class 4 are calculating 25×8 mentally.

Can you complete the calculations in each of the methods?

Method 1

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

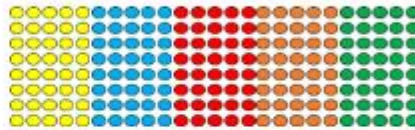
$$= 160 + \square = \square$$



Method 2

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

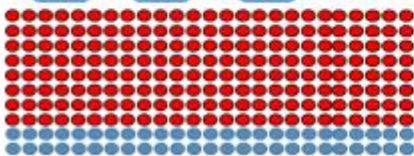
$$= 5 \times \square = \square$$



Method 3

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

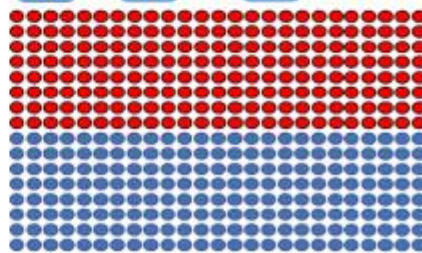
$$= \square - \square = \square$$



Method 4

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

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



Solve this calculation using the three methods below.

$$18 \times 9 =$$

<p>Method 1:</p> $18 \times 9 = 10 \times 9 + 8 \times 9 = \underline{\quad} + \underline{\quad} = \underline{\quad}$	<p>Method 2:</p> $18 \times 9 = 18 \times 10 - 18 \times 1 = \underline{\quad} - \underline{\quad} = \underline{\quad}$
<p>Method 3:</p> $18 \times 9 = 20 \times 9 - 2 \times 9 = \underline{\quad} - \underline{\quad} = \underline{\quad}$	

Now you've had a go at these methods can you choose your favourite ones and answer these questions.

Remember to draw the counters if that helps you.

$$15 \times 7 = 105$$

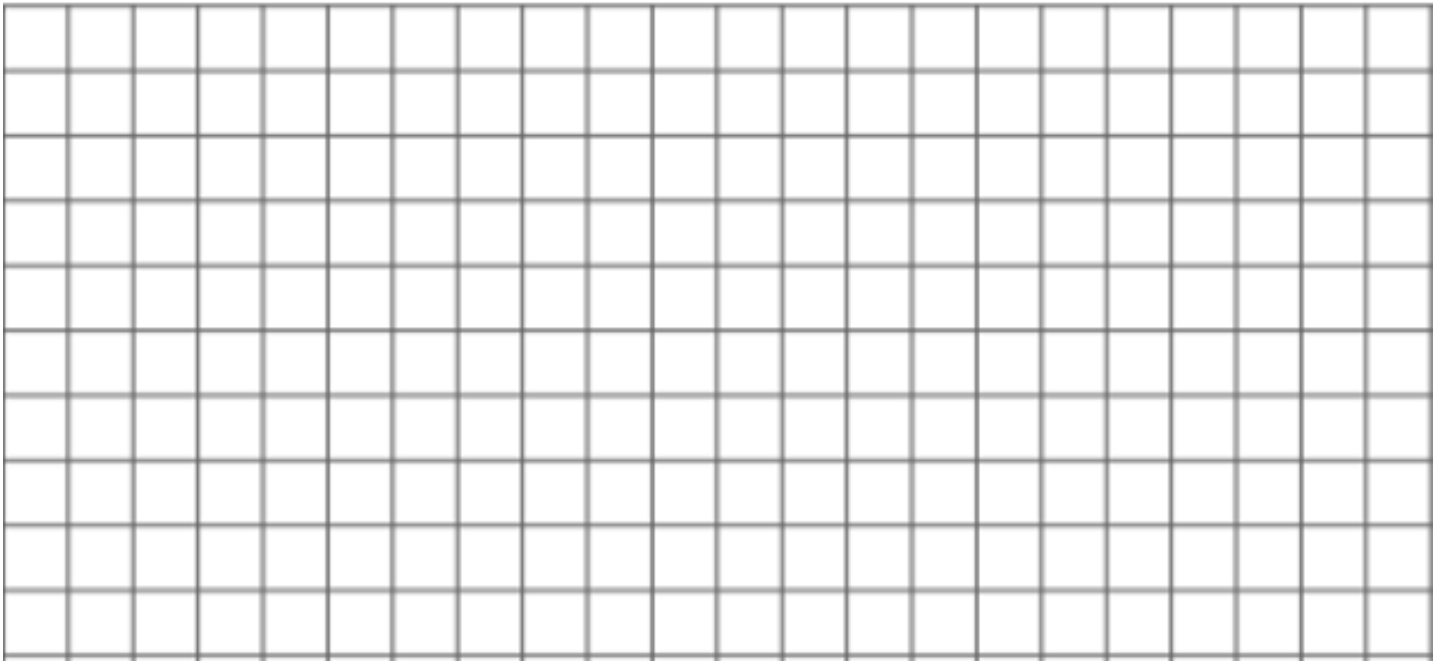
$$32 \times 8 = 256$$

$$18 \times 5 = 90$$

$$23 \times 6 = 138$$

$33 \times 3 = 99$

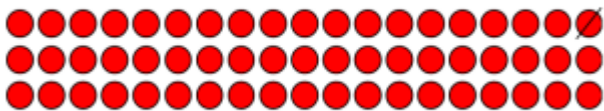
$55 \times 4 = 220$



Problem solving and reasoning:



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?



Here are three number cards.



Dora, Annie and Eva choose one of the number cards each.

They multiply their number by 5

Dora says,



I did 40×5 and then subtracted 2 lots of five.

Annie says,

I multiplied my number by 10 and then divided 210 by 2

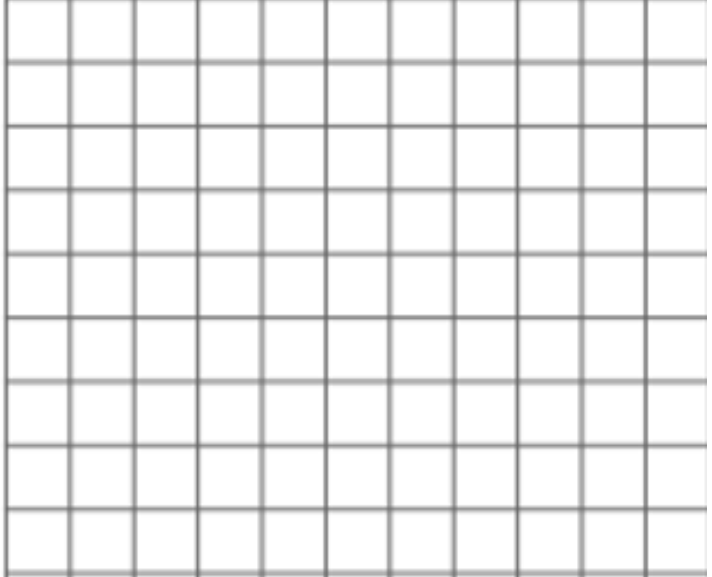
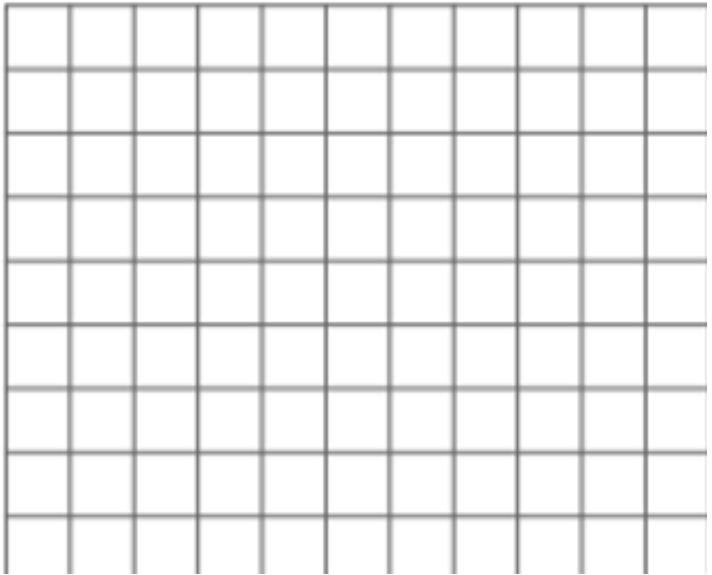
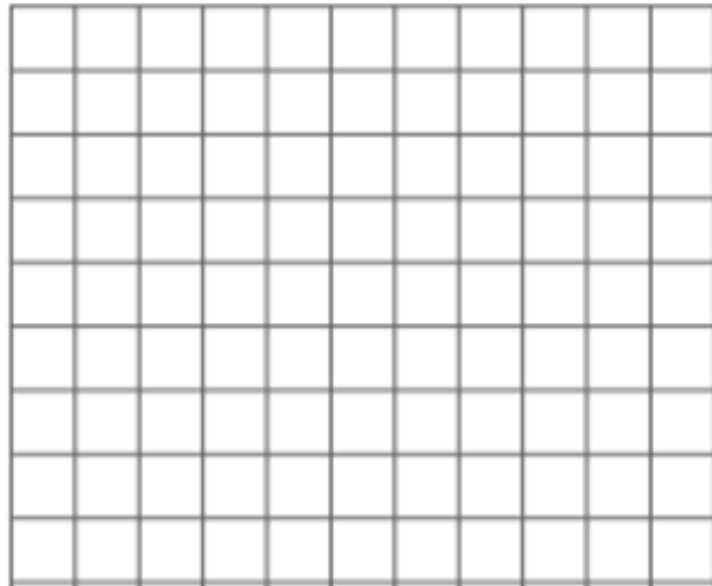


Eva says,



I halved my 2-digit number and doubled 5 so I calculated 21×10

Which number card did each child have?
Would you have used a different method to multiply the numbers by 5?



Further challenge

How many ways can you think of to calculate 8?

Which do you think is the most efficient?

How would you calculate 228×5 mentally?

