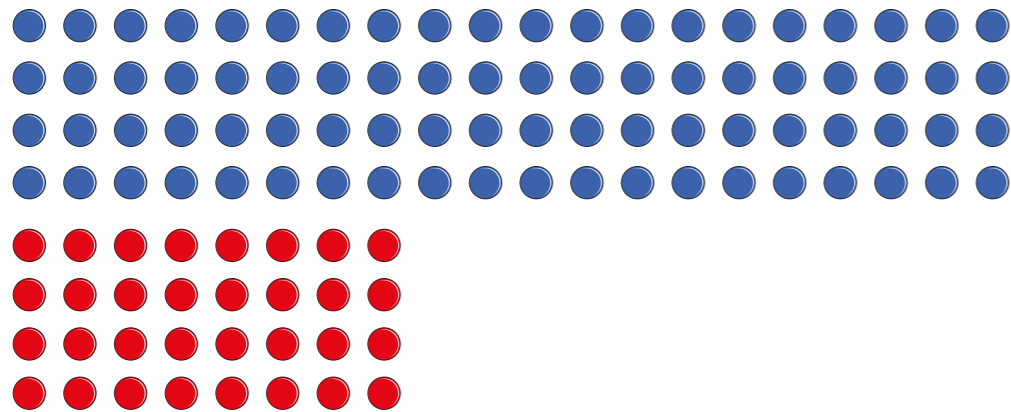


# Efficient multiplication

1 Class 4 are multiplying  $28 \times 4$  mentally. They are trying two different methods.

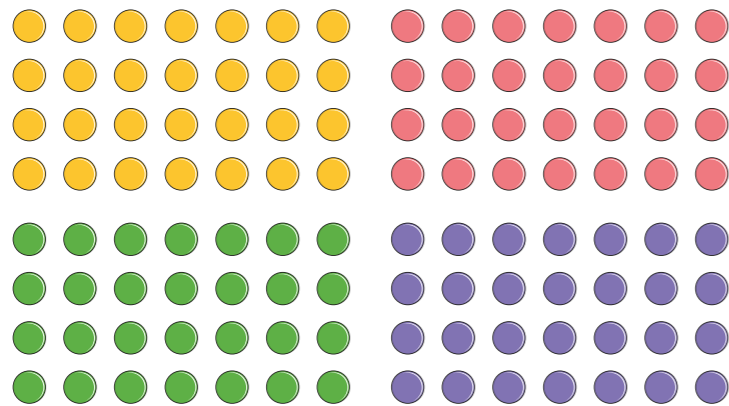
a) Complete their calculations.

Method 1



$$20 \times 4 + 8 \times 4 = \square + \square = \square$$

Method 2



$$4 \times \square = \square$$

b) Which method do you find easier?  
Talk about it with a partner.

c) What other methods could you use to work out  $28 \times 4$ ?

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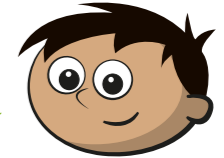
2 Mo, Amir and Annie worked out  $35 \times 6$  in 3 different ways.



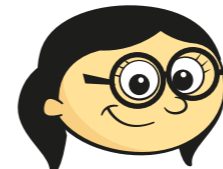
Mo

I multiplied 30 by 6 and then added 5 more lots of 6

I multiplied 35 by 2, then multiplied that answer by 3



Amir



Annie

I multiplied 5 by 6, then multiplied that answer by 7

a) Work out the answer using each method to show that they are all correct.

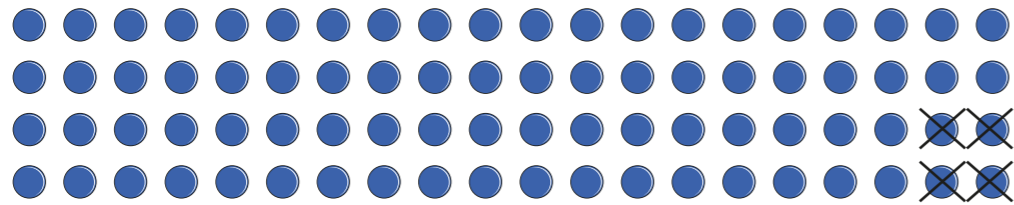
Mo

Amir

Annie

b) Who has used the most efficient method?  
Talk about it with a partner.

3 Scott is working out  $21 \times 4$



$$\begin{aligned} 20 \times 4 &= 80 \\ 80 - 4 &= 76 \\ 21 \times 4 &= 76 \end{aligned}$$

a) What mistake has Scott made?

\_\_\_\_\_

b) What is the correct answer?

4 Jack works out  $36 \times 9$

$36 \times 9$   
 $36 \times (10 - 1)$   
 $360 - 36 = 324$

Adapt Jack's method to work out  $36 \times 99$

$36 \times 99 = \text{[ ]}$

5 Esther has found a quick way to multiply 84 by 5

$$\begin{aligned} 84 \times 5 \\ 84 \times 10 &= 840 \\ \text{(then divide by 2) which is } &420 \end{aligned}$$

Use Esther's method to complete the calculations.

$43 \times 5 = \text{[ ]}$

$74 \times 5 = \text{[ ]}$

$62 \times 5 = \text{[ ]}$

6 Tommy and Dora are both working out  $25 \times 8$

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

a) Use Tommy's method to work out the answer.

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

b) Use Dora's method to work out the answer.

c) Whose method do you prefer? Why?

\_\_\_\_\_

d) Do you know another method?

