

# Lesson 4: Monday 11th Jan

## Efficient Multiplication

Spring Term: Block 1

1

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?

2

Jack works out  $36 \times 9$

$$\begin{aligned} 36 \times 9 \\ 36 \times (10 - 1) \\ 360 - 36 &= 324 \end{aligned}$$



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

$$36 \times 99 = \boxed{\phantom{000}}$$

3

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.

$$43 \times 5 = \boxed{\phantom{00}}$$

$$74 \times 5 = \boxed{\phantom{00}}$$

$$62 \times 5 = \boxed{\phantom{00}}$$

### Challenge:

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?

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d) Do you know another method?

# Answers – Purple Pen Only!

1

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?

He has taken 4, he should have added it.

b) What is the correct answer?

84

2

Jack works out  $36 \times 9$

$$\begin{aligned} 36 \times 9 \\ 36 \times (10 - 1) \\ 360 - 36 = 324 \end{aligned}$$



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

$$36 \times 99 = 3,564$$

3

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.

$$43 \times 5 = 215$$

$$74 \times 5 = 370$$

$$62 \times 5 = 310$$

## Challenge:

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.

200



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

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

200

c) Whose method do you prefer? Why?