## Group 3 Maths Challenges

Activity 1

| x | a | b | c |
| :---: | :---: | :---: | :---: |
| d | 12 |  | 36 |
| e | 18 |  | 54 |
| f |  | 56 |  |

This is a times table grid.
Find out what the numbers the letters represent and then use those numbers to fill the missing boxes.
$a=$ $\qquad$ $\mathrm{b}=$ $\qquad$ $c=$ $\qquad$ $d=$ $\qquad$
$\qquad$ $f=$ $\qquad$

## Activity 2

3

6

9

12


Example to complete Q2.
First answer the ones column E.g. 7x3=21 (carry the 2 underneath and put the 1 in the answer box)
Now, as you know the answer to question 2 below is 1281.
Next use the answer and divide using the bus stop method to find out what the missing boxes in the question are.
So 1281 divide by 3

11


## Activity 3

Spot and then explain the mistake.

## Spot the Mistake

Fatima has completed this formal multiplication. Can you spot the mistake?

$$
\begin{array}{r}
409 \\
\times \quad 5 \\
\hline 205
\end{array}
$$

Activity 4: Each calculation either side of the $=$ sign needs to all have the same answer.

So there are 4 calculations on the top row which will all give the same answer and then the 4 calculations on the bottom row will all have the same answer.

## Missing Numbers

Fill in the missing numbers:
$24 \times 2=\square \times 3=12 \times \square=\square \times 6$
$10 \div 2=\square \div 4=\square \div 8=80 \div \square$

## Activity 5:

Factors are numbers which you can multiply together to get another answer with no remainder.

For example:
$1 \times 20=20 \quad 2 \times 10=20 \quad 4 \times 5=20 \quad 5 \times 4=20 \quad 10 \times 2=20 \quad 20 \times 1=20$
So $1,2,4,5,10$ and 20 are all factors of 20
(It is helpful to use your knowledge of multiples, just think to yourself, is 20 in the $2 x$ table? Yes. Is it in the $3 x$ table? No etc.)

Tom said there are 6 factors in 12, is he correct? Show your workings out Tom said there are 6 factors in 24, is he correct? Show your workings out.

