

Multiply 4-digits by 1-digit

Reasoning and Problem Solving



Alex calculated $1,432 \times 4$

Here is her answer.

| | Th | H | T | O |
|----------|----|----|----|---|
| | 1 | 4 | 3 | 2 |
| \times | | | | 4 |
| | 4 | 16 | 12 | 8 |

$$1,432 \times 4 = 416,128$$

Can you explain what Alex has done wrong?

Can you work out the missing numbers using the clues?

$$\begin{array}{r}
 \boxed{} \boxed{} \boxed{} \boxed{} \\
 \times 5 \\
 \hline
 \boxed{} \boxed{} \boxed{} \boxed{} \boxed{}
 \end{array}$$

- The 4 digits being multiplied by 5 are consecutive numbers.
- The first 2 digits of the product are the same.
- The fourth and fifth digits of the answer add to make the third.

Multiply 2-digits (Area Model)

Reasoning and Problem Solving



Eva says,



To multiply 23 by 57 I just need to calculate 20×50 and 3×7 and then add the totals.

What mistake has Eva made?
Explain your answer.

Amir hasn't finished his calculation.
Complete the missing information and record the calculation with an answer.

| × | 40 | 2 |
|----|----|---|
| 40 | | |
| 6 | | |

Farmer Ron has a field that measures 53 m long and 25 m wide.

Farmer Annie has a field that measures 52 m long and 26 m wide.

Dora thinks that they will have the same area because the numbers have only changed by one digit each.

Do you agree? Prove it.

Multiply 2-digits by 2-digits

Reasoning and Problem Solving

R

Tommy says,



It is not possible to make 999 by multiplying two 2-digit numbers.

Do you agree?
Explain your answer.

Amir has multiplied 47 by 36



| | | | |
|---|---|---|---|
| | | 4 | 7 |
| × | | 3 | 6 |
| | 2 | 8 | 2 |
| | 1 | 4 | 1 |
| | 3 | 2 | 3 |

Alex says,



Amir is wrong because the answer should be 1,692 not 323

Who is correct?
What mistake has been made?

