1) Find the representations that show each calculation in 3 different ways.

a) 15 × 14

b) 12 × 23

c) 24 × 32

d) 45 × 16

I

×	10	2
20	200	40
3	30	6

L

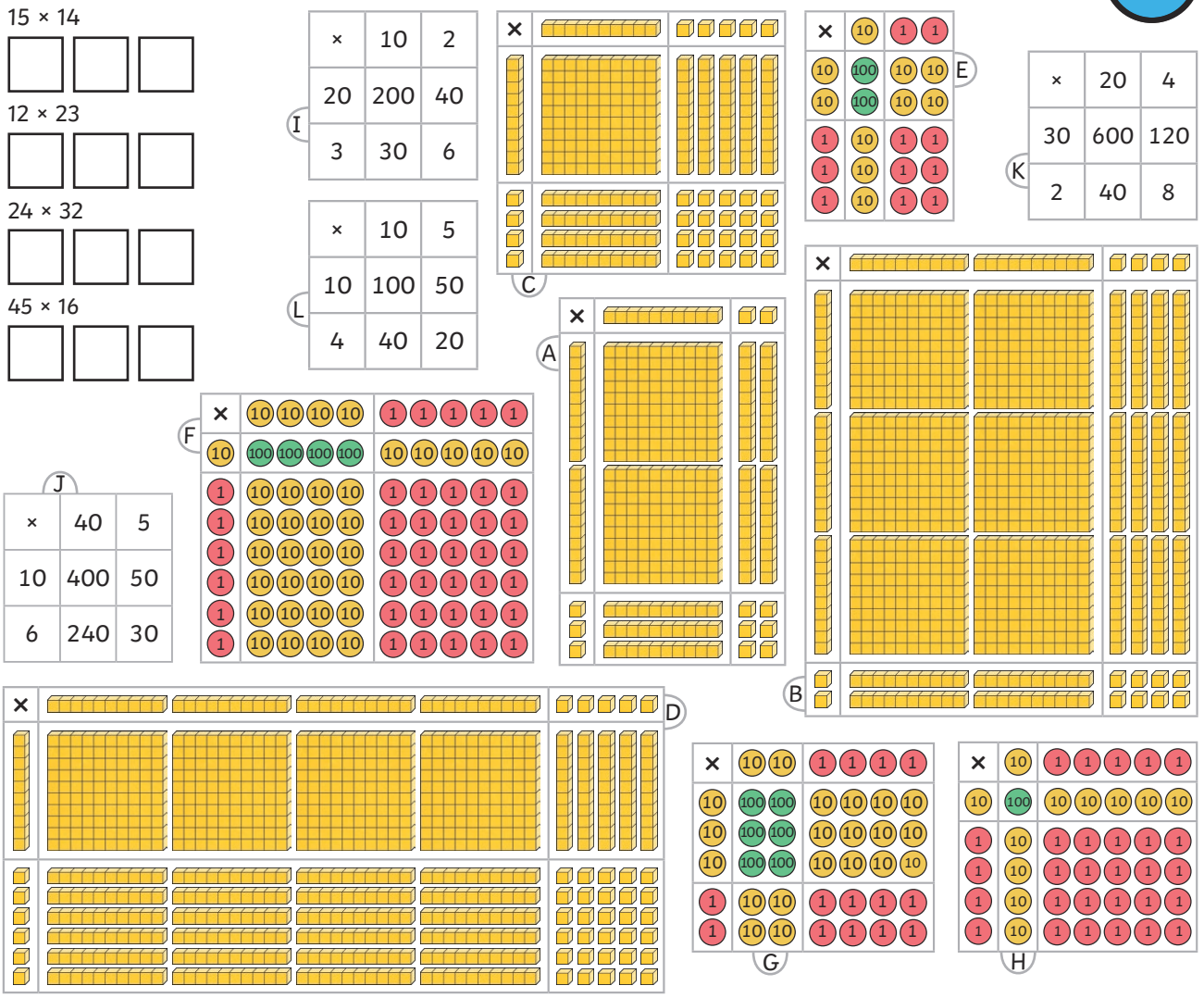
×	10	5
10	100	50
4	40	20

J

×	40	5
10	400	50
6	240	30

K

×	20	4
30	600	120
2	40	8



2) **a)** Use base ten to represent 14 × 17.

Next, use place value counters to show this multiplication calculation.

Finally, show this correctly using a grid.

b) What is the same and what is different about the three representations?

1) Melissa, Harry and Hank are calculating 24 × 18. They each share their strategy for finding the product.

Whose method would you choose and why?

_____

_____

_____

_____

2) Zena is practising the grid method of multiplying 2-digit numbers. Can you identify the mistakes she has made and explain what she has done wrong?

×	50	2
20	100	40
4	200	8

_____

_____

_____

_____

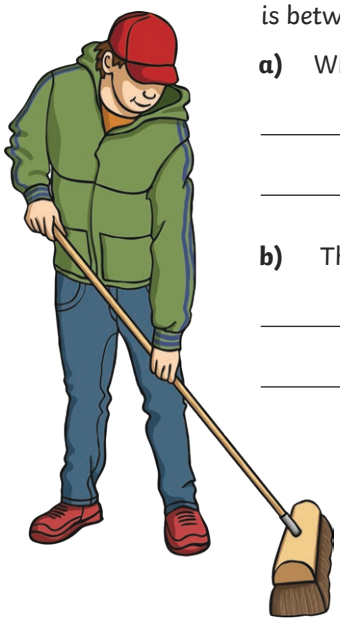
×	30	5
30	900	150
6	18	30

_____

_____

_____

_____



1) The children at Twinkl Academy are trying to solve the caretaker's clues to find the measurements of their rectangular school hall floor. The caretaker says that the length of each side of the hall floor is a 2-digit number and the area of the hall floor is between $350m^2$ and $400m^2$.

a) What could the measurements be? Find three possible solutions.

b) The caretaker adds that one of the sides has a digit sum of 5. Find three possible solutions.

c) The caretaker gives a final clue. He says the other side has a digit sum of 8 and the exact area is $391m^2$. What are the exact measurements of the hall?