

Grid Method: Multiplying 2-digits by 2-digits.

×	10	10	10	10	1	1	1	1
10	100	100	100	100	10	10	10	10
10	100	100	100	100	10	10	10	10
10	100	100	100	100	10	10	10	10
1	10	10	10	10	1	1	1	1
1	10	10	10	10	1	1	1	1

×	40	4
30	1,200	120
2	80	8

$$\begin{array}{r} 1,200 \\ 120 \\ 80 \\ + 8 \\ \hline 1408 \\ \hline \end{array}$$

Calculate: $44 \times 32 = 1408$

Use the grid method shown above to calculate:

34×42

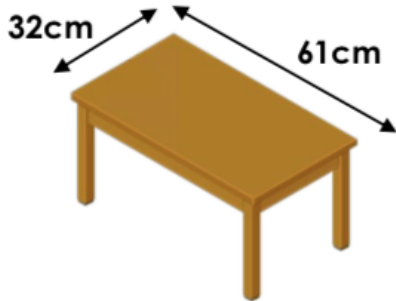
52×31

65×43

51×34

Can you challenge yourself with these problems?

5a. Jane buys $2,000\text{cm}^2$ of cloth for the table.



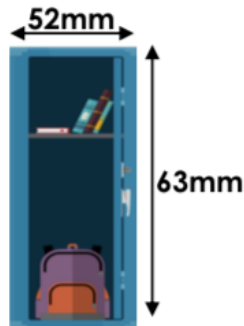
Has Jane bought enough cloth?

2b. Josie buys $1,200\text{m}^2$ of turf for her garden that measures $31\text{m} \times 41\text{m}$.

	40	1
30		
1		

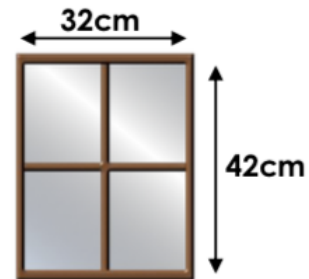
Has Josie bought enough turf?

8a. Gail buys $3,000\text{mm}^2$ of coloured paper for the back of her school locker.



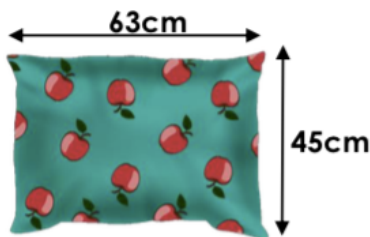
How much more paper will Gail need?

5b. Beth buys $1,000\text{cm}^2$ of material to make a window blind.



Has Beth bought enough material?

8b. Henry buys $2,500\text{cm}^2$ of fleece to make a cushion cover.



How much more fleece will Henry need?

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.

Can you write your own problem for a family member?

Answers:

Use the grid method shown above to calculate:

$$34 \times 42 = 1428$$

$$52 \times 31 = 1612$$

$$65 \times 43 = 2795$$

$$51 \times 34 = 1734$$

2b. No. Josie has bought $1,200\text{m}^2$ but she needs $31\text{m} \times 41\text{m} = 1,271\text{m}^2$

5a. Yes. Jane has bought $2,000\text{cm}^2$ and she only needs $32\text{cm} \times 61\text{cm} = 1,952\text{cm}^2$.

5b. No. Beth has bought $1,000\text{cm}^2$ but she needs $32\text{cm} \times 42\text{cm} = 1,344\text{cm}^2$.

8a. Gail needs 276mm^2 because $52\text{mm} \times 63\text{mm} = 3,276\text{mm}^2$ and $3,276 - 3,000 = 276$.

8b. Henry needs 335cm^2 because $45\text{cm} \times 63\text{cm} = 2,835\text{cm}^2$ and $2,835 - 2,500 = 335$.

Dora is wrong.