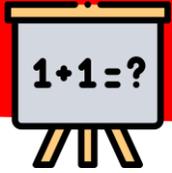




## C32: Multiplier en ligne (2)

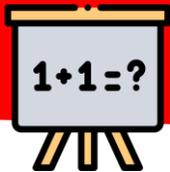


**Comment multiplier  
en ligne ?**



**A quoi sert une  
multiplication ?**

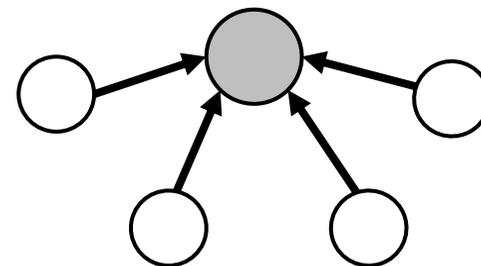
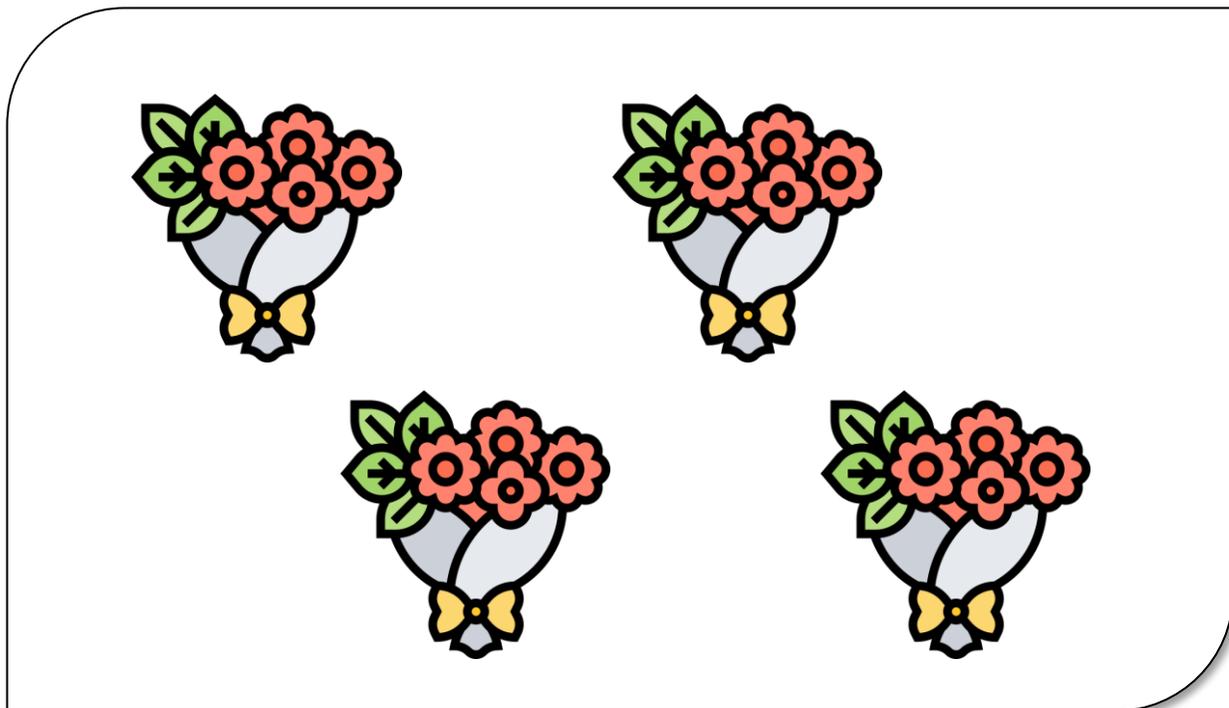
**Invente une histoire de  
multiplication.**

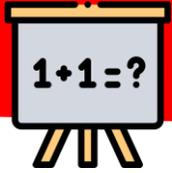


# La multiplication sert à



Rassembler des collections identiques

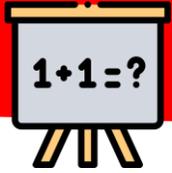




## C32: Multiplier en ligne (2)

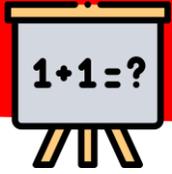


**Quelles stratégies utiliser  
pour calculer  $27 \times 5$  ?**



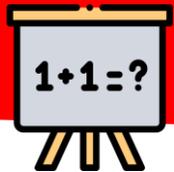
## C32: Multiplier en ligne (2)

$$5 \times 27 =$$



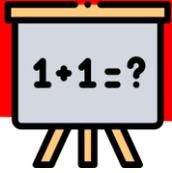
## C32: Multiplier en ligne (2)

$$5 \times 27 =$$



## C32: Multiplier en ligne (2)

$$5 \times 27 =$$

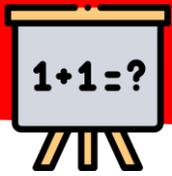


## C32: Multiplier en ligne (2)

$$5 \times 27 =$$

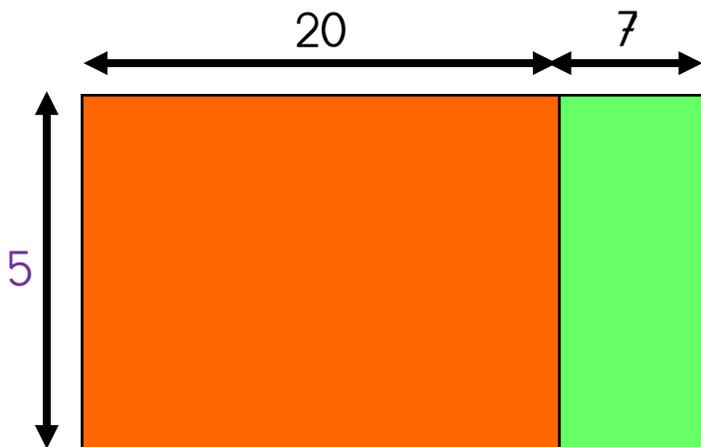
$20 + 7$

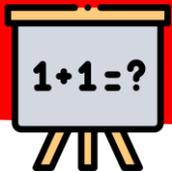
The diagram illustrates the decomposition of the number 27 into 20 and 7. The number 27 is circled in blue, with lines connecting it to the numbers 20 and 7 below it. The number 5 is purple, the multiplication sign is black, and the equals sign is black. The number 20 is green, the plus sign is black, and the number 7 is yellow.



## C32: Multiplier en ligne (2)

$$5 \times 27 =$$
$$20 + 7$$

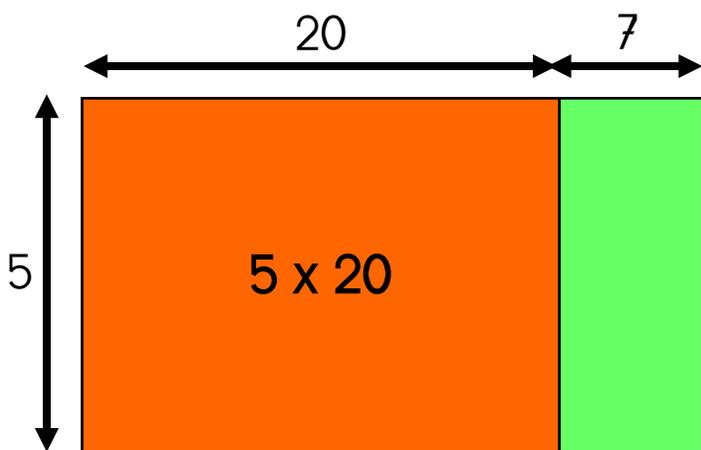


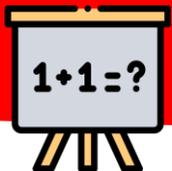


## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20$$

$$20 + 7$$

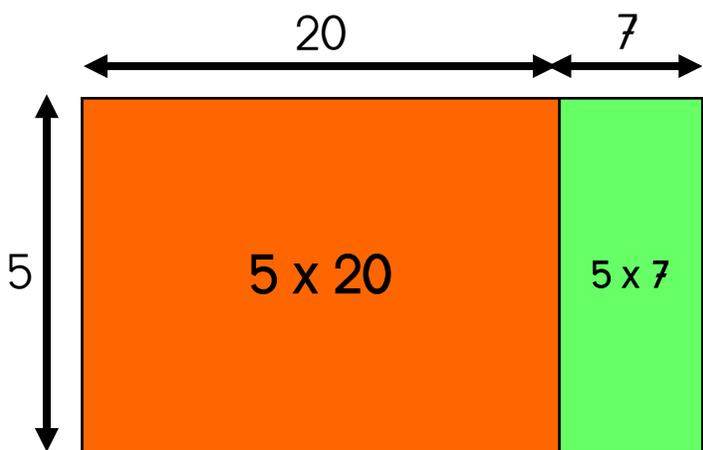


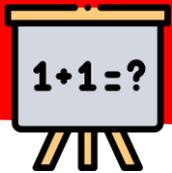


## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20 + 5 \times 7$$

$$20 + 7$$

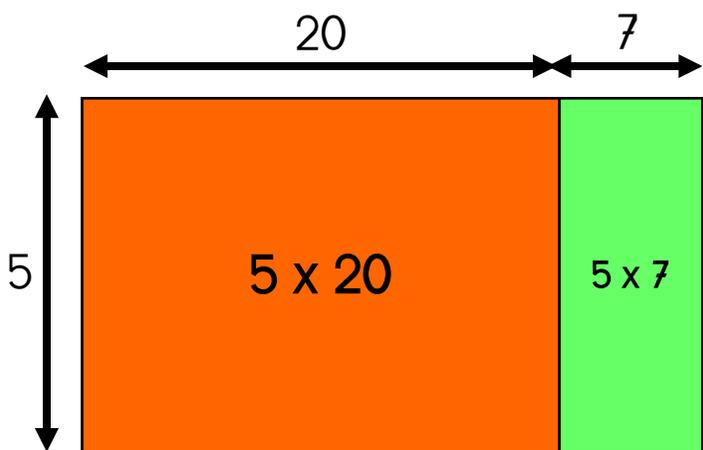


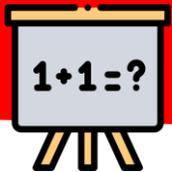


## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20 + 5 \times 7$$

$20 + 7$



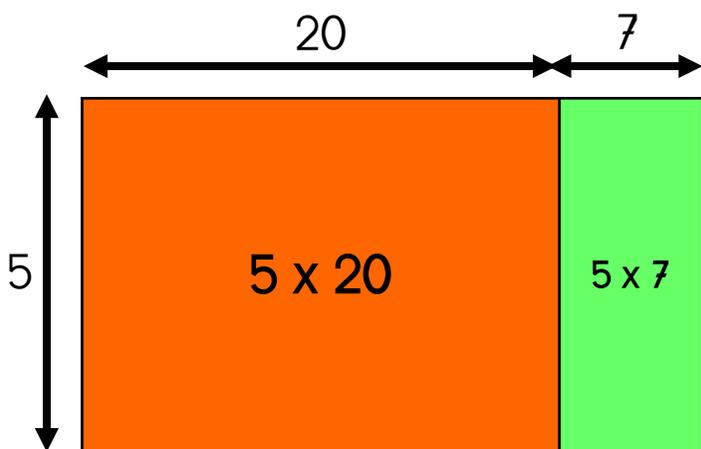


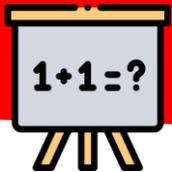
## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20 + 5 \times 7$$

$$20 + 7$$

$$100$$



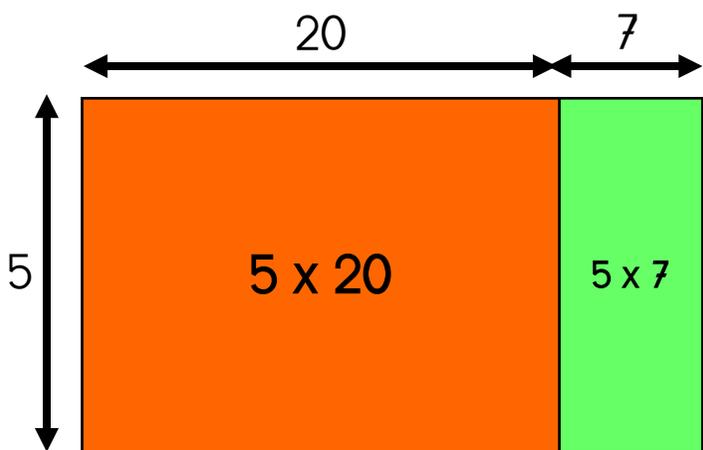


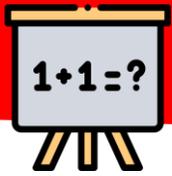
## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20 + 5 \times 7$$

20 + 7

100

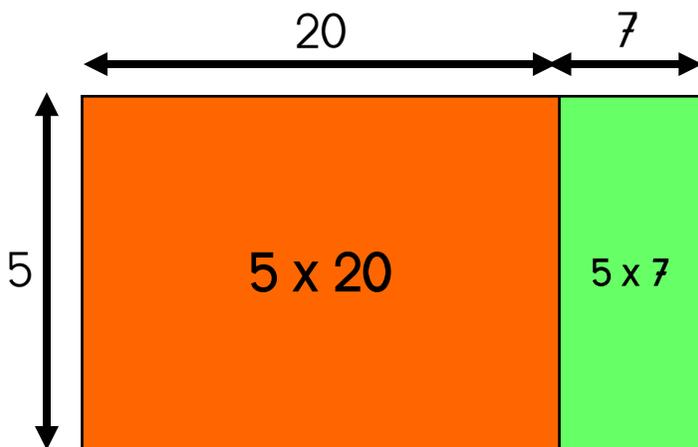


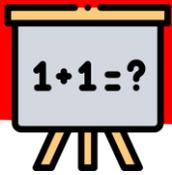


## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20 + 5 \times 7$$

$20 + 7$        $100 + 35$



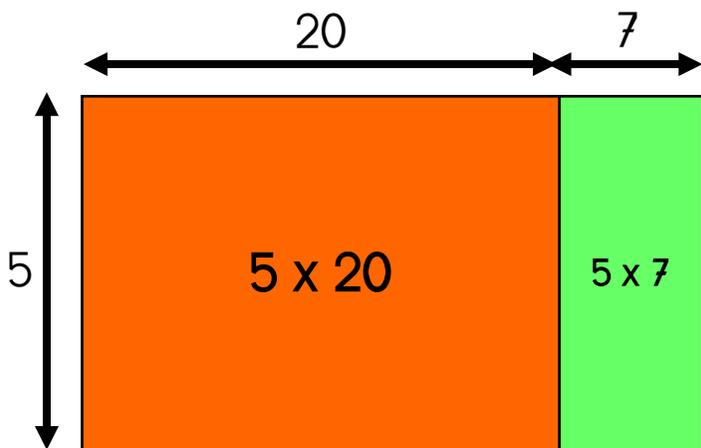


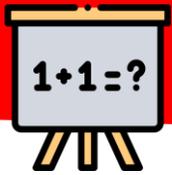
## C32: Multiplier en ligne (2)

$$5 \times 27 = 5 \times 20 + 5 \times 7$$

$$20 + 7$$

$$100 + 35$$





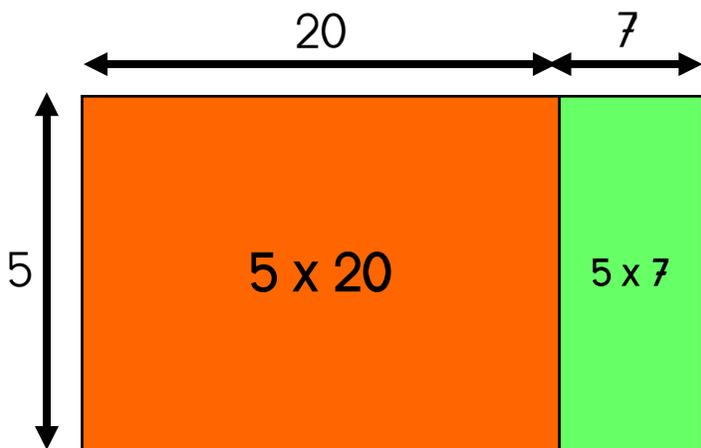
## C32: Multiplier en ligne (2)

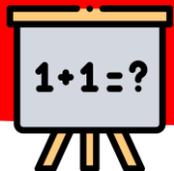
$$5 \times 27 = 5 \times 20 + 5 \times 7$$

$$20 + 7$$

$$100 + 35$$

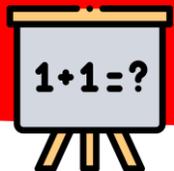
$$135$$





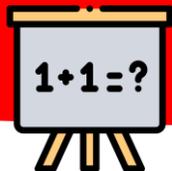
## C32: Multiplier en ligne (2)

$$8 \times 34 =$$



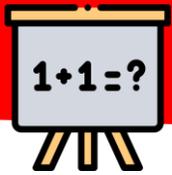
## C32: Multiplier en ligne (2)

$$8 \times 34 =$$



## C32: Multiplier en ligne (2)

$$8 \times 34 =$$

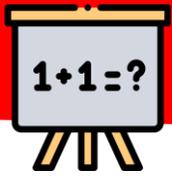


## C32: Multiplier en ligne (2)

$$8 \times 34 =$$

Diagram illustrating the decomposition of the multiplication  $8 \times 34$  into  $8 \times (30 + 4)$ . The number 34 is circled, and lines connect it to 30 and 4 below.

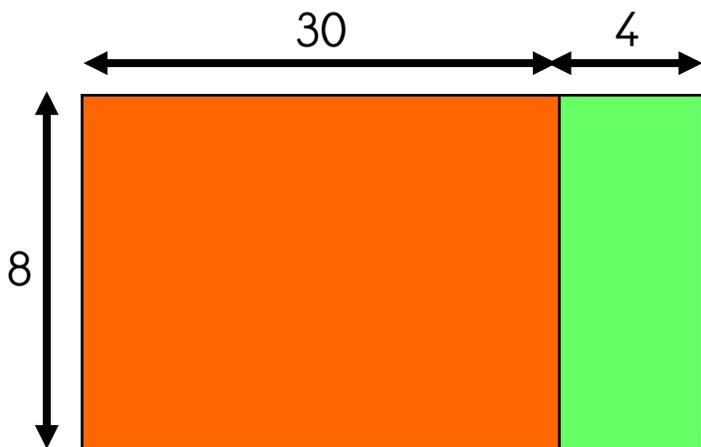
$$30 + 4$$

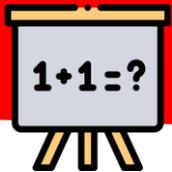


## C32: Multiplier en ligne (2)

$$8 \times 34 =$$

$$30 + 4$$

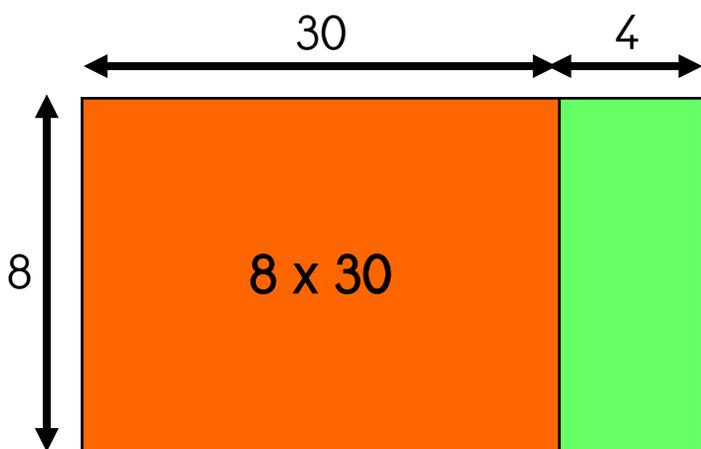


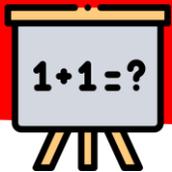


## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30$$

$$30 + 4$$

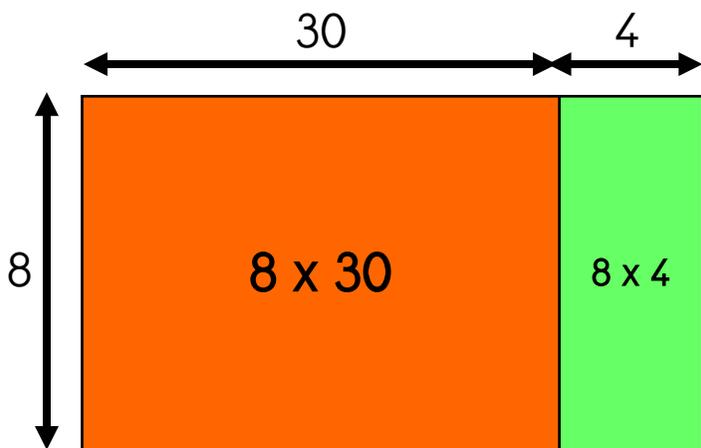


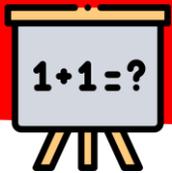


## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30 + 8 \times 4$$

$$30 + 4$$

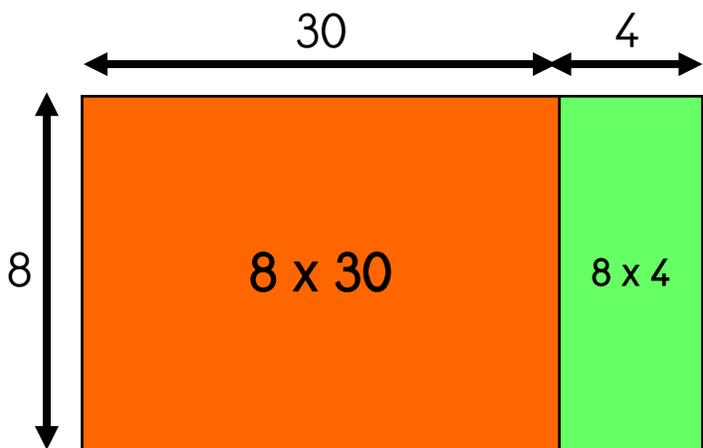


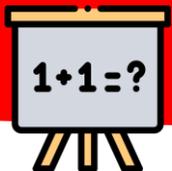


## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30 + 8 \times 4$$

$30 + 4$



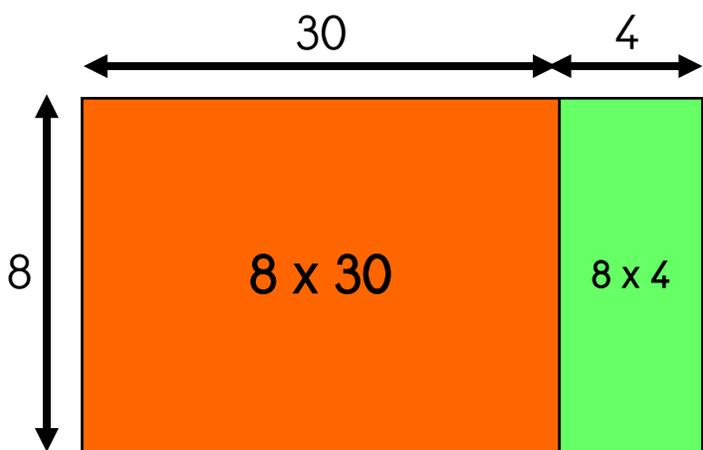


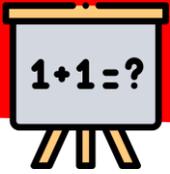
## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30 + 8 \times 4$$

$30 + 4$

$240$



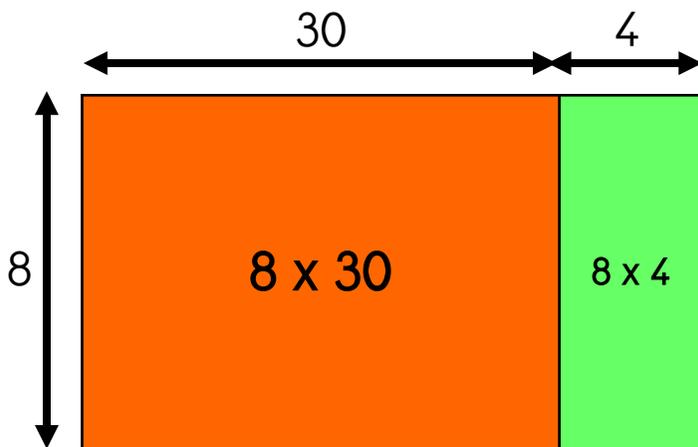


## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30 + 8 \times 4$$

$30 + 4$

$240$

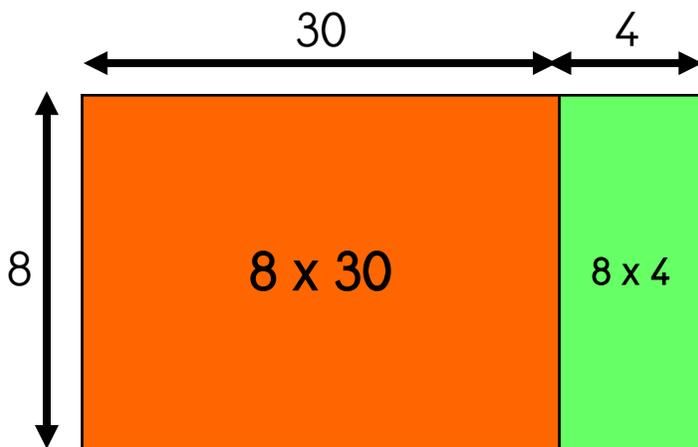


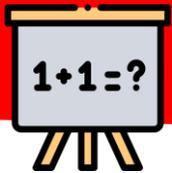


## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30 + 8 \times 4$$

30 + 4      240 + 32



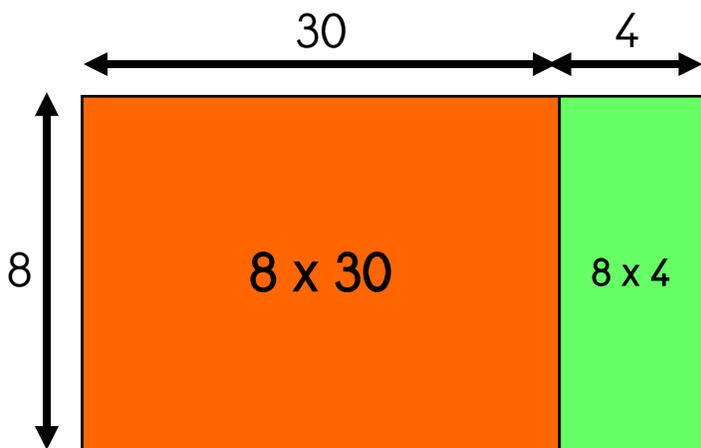


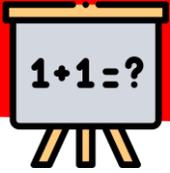
## C32: Multiplier en ligne (2)

$$8 \times 34 = 8 \times 30 + 8 \times 4$$

$$30 + 4$$

$$240 + 32$$





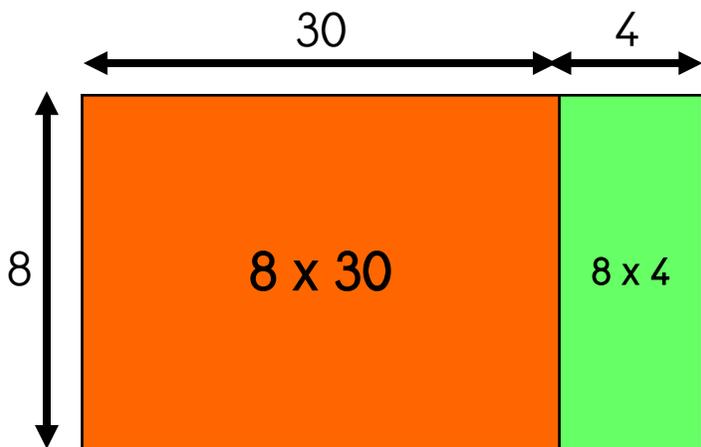
## C32: Multiplier en ligne (2)

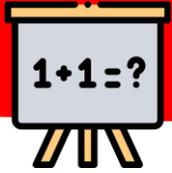
$$8 \times 34 = 8 \times 30 + 8 \times 4$$

$$30 + 4$$

$$240 + 32$$

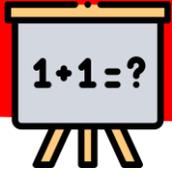
$$272$$





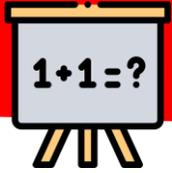
## C32: Multiplier en ligne (2)

$$3 \times 59 =$$



## C32: Multiplier en ligne (2)

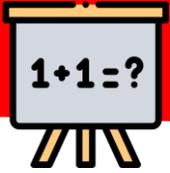
$$3 \times 59 =$$



## C32: Multiplier en ligne (2)

$$3 \times 59 =$$

## C32: Multiplier en ligne (2)

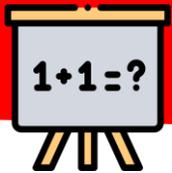


$$3 \times 59 =$$

Diagram illustrating the decomposition of 59 into 50 and 9:

$$59 = 50 + 9$$

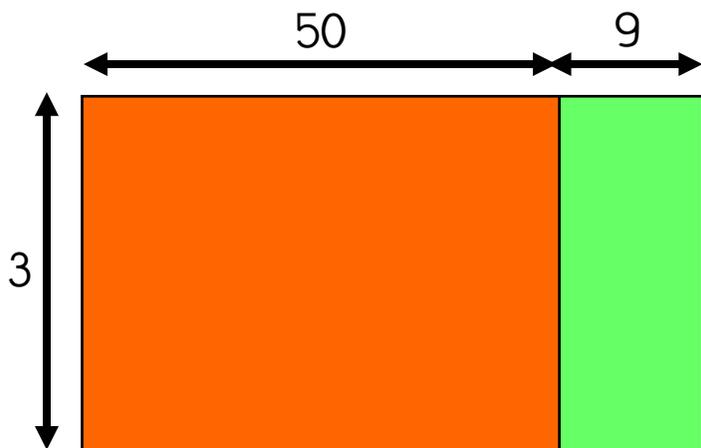
The number 59 is circled in the first equation, with lines connecting it to the 50 and 9 in the second equation.

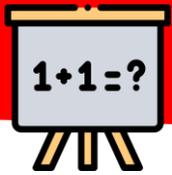


## C32: Multiplier en ligne (2)

$$3 \times 59 =$$

$$50 + 9$$

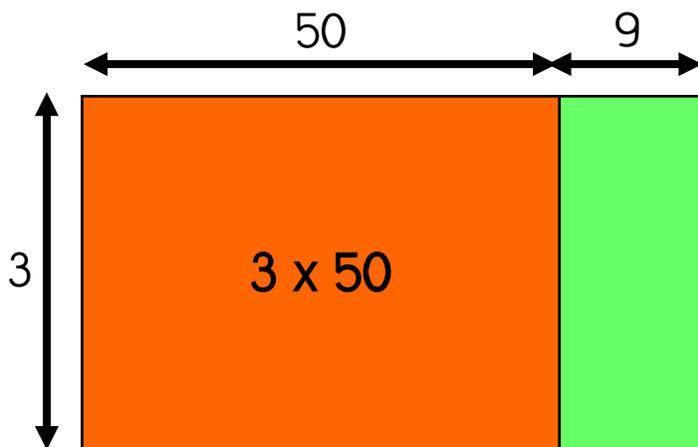


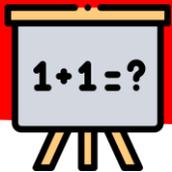


## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50$$

$$50 + 9$$

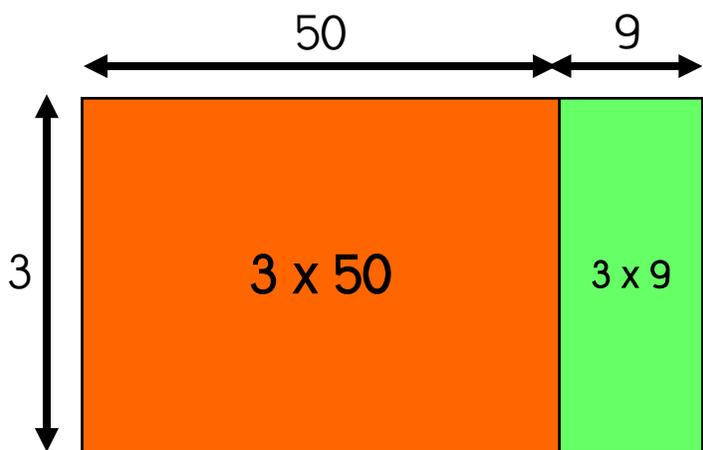


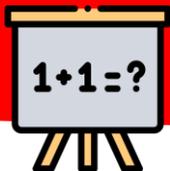


## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50 + 3 \times 9$$

$$50 + 9$$

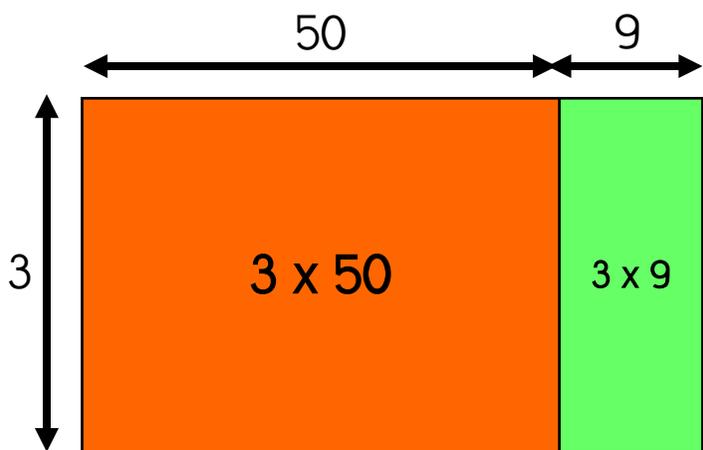


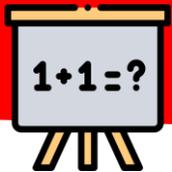


## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50 + 3 \times 9$$

$50 + 9$



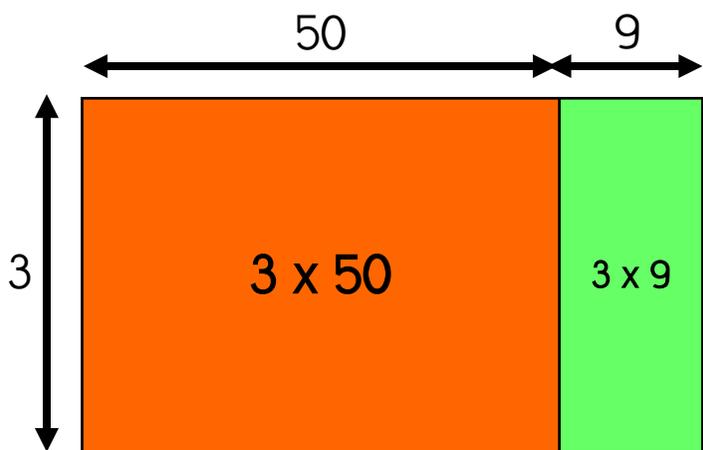


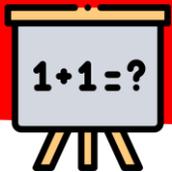
## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50 + 3 \times 9$$

$50 + 9$

$150$



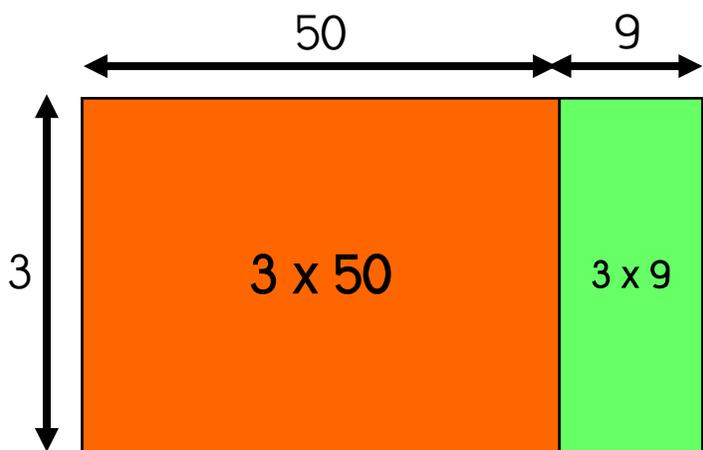


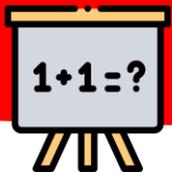
## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50 + 3 \times 9$$

$50 + 9$

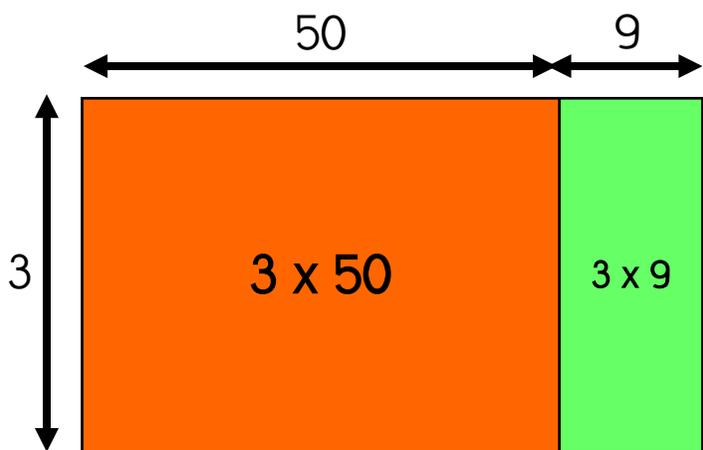
$150$

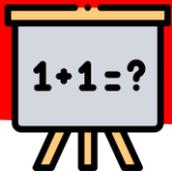




## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50 + 3 \times 9$$
$$50 + 9 \qquad 150 + 27$$



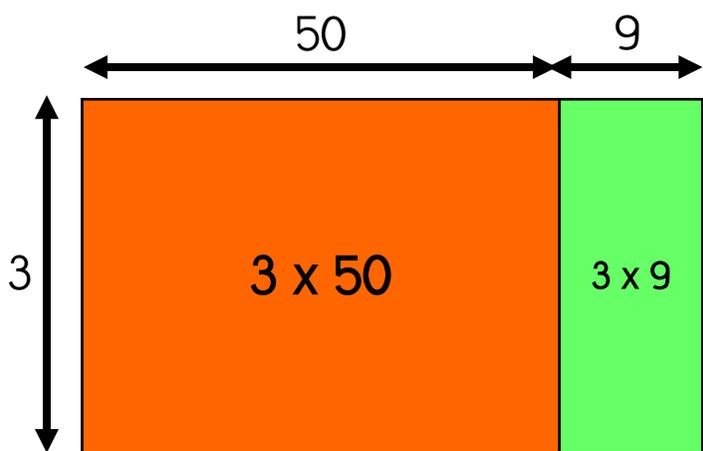


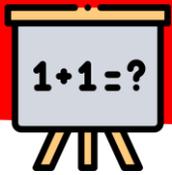
## C32: Multiplier en ligne (2)

$$3 \times 59 = 3 \times 50 + 3 \times 9$$

$$50 + 9$$

$$150 + 27$$





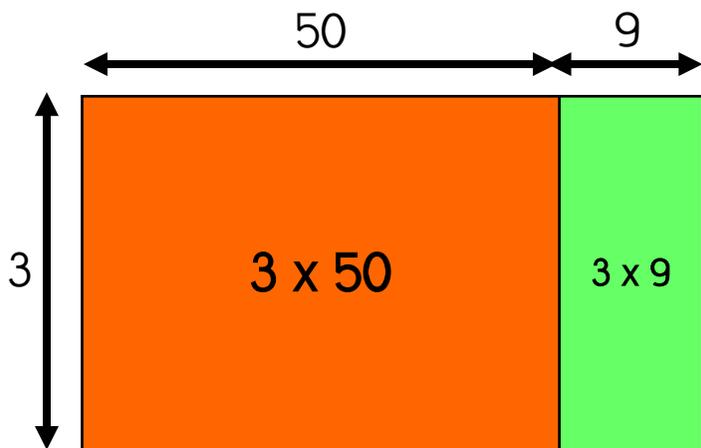
## C32: Multiplier en ligne (2)

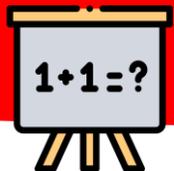
$$3 \times 59 = 3 \times 50 + 3 \times 9$$

$$50 + 9$$

$$150 + 27$$

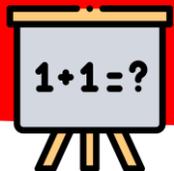
$$177$$





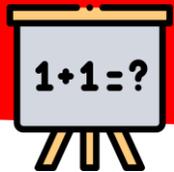
## C32: Multiplier en ligne (2)

$$4 \times 26 =$$



## C32: Multiplier en ligne (2)

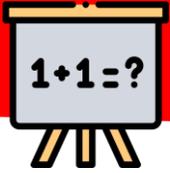
$$4 \times 26 =$$

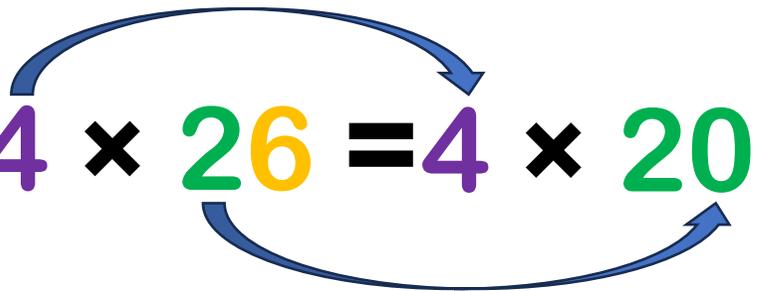


## C32: Multiplier en ligne (2)

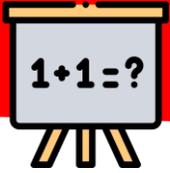
$$4 \times 26 = 4 \times$$
A blue curved arrow starts above the first purple '4' and points to the second purple '4' in the equation.

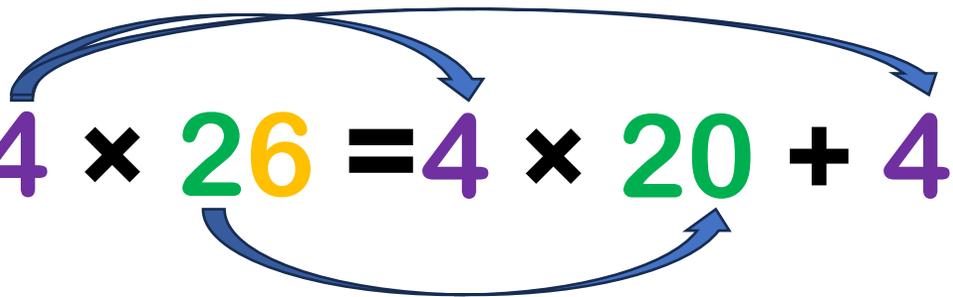
## C32: Multiplier en ligne (2)

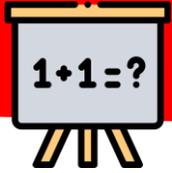


$$4 \times 26 = 4 \times 20$$


## C32: Multiplier en ligne (2)

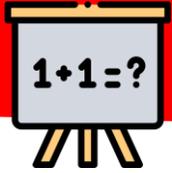


$$4 \times 26 = 4 \times 20 + 4 \times$$




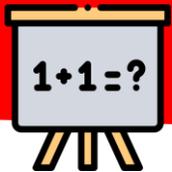
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6$$
The equation  $4 \times 26 = 4 \times 20 + 4 \times 6$  is shown with colored numbers: the first 4 is purple, 26 is green and yellow, the second 4 is purple, 20 is green, the plus sign is black, the third 4 is purple, and 6 is yellow. Four blue curved arrows illustrate the decomposition: one from the first 4 to the second 4, one from the 26 to the 20, one from the 26 to the 6, and one from the 26 to the plus sign.



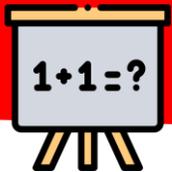
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 =$$
The diagram illustrates the distributive property of multiplication. It shows the equation  $4 \times 26 = 4 \times 20 + 4 \times 6 =$ . The number 4 is purple, 26 is green and yellow, 20 is green, and 6 is yellow. Blue curved arrows show the mapping: one arrow from the 4 in the first term to the 4 in the second term, another from the 26 to the 20, and a third from the 26 to the 6. A fourth arrow points from the 20 to the 6, indicating the addition of the two products.



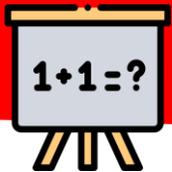
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 =$$



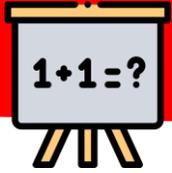
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 = 80$$
The diagram illustrates the distributive property of multiplication. The equation  $4 \times 26 = 4 \times 20 + 4 \times 6 = 80$  is shown. The number 26 is decomposed into 20 and 6. The term  $4 \times 20$  is enclosed in a white box. Blue curved arrows show the flow of the calculation: one arrow from the 26 in the first term to the 20 in the second term, another from the 26 to the 6 in the third term, and a third from the 20 in the second term to the 6 in the third term. The final result 80 is shown in green.



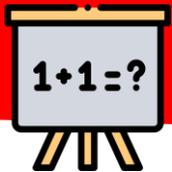
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 = 80$$



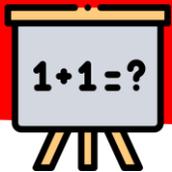
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 = 80 + 24$$



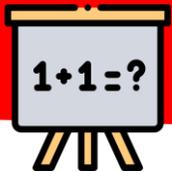
## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 = 80 + 24$$



## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 = 80 + 24 =$$



## C32: Multiplier en ligne (2)

$$4 \times 26 = 4 \times 20 + 4 \times 6 = 80 + 24 = 104$$

The diagram illustrates the distributive property of multiplication. The equation  $4 \times 26 = 4 \times 20 + 4 \times 6 = 80 + 24 = 104$  is shown. The numbers are color-coded: 4 is purple, 26 is green and yellow, 20 is green, 6 is yellow, 80 is green, 24 is yellow, and 104 is red. Three blue curved arrows indicate the mapping of terms: one arrow from the purple 4 in the first term to the purple 4 in the second term, another from the yellow 6 in the first term to the yellow 6 in the third term, and a third from the yellow 6 in the first term to the yellow 6 in the fourth term.

# Tableau des stratégies pour multiplier

## 1 Utiliser une addition itérée

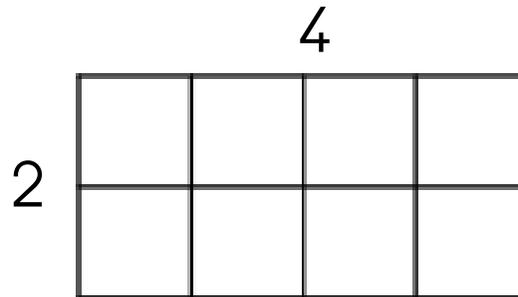


$$2 + 2 + 2 + 2 = 8$$

$$\rightarrow 4 \times 2 = 8$$

Je compte le nombre de groupes.

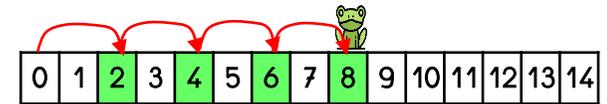
## 2 Utiliser un quadrillage



$$\rightarrow 4 \times 2 = 8$$

Je compte le nombre de lignes et de colonnes.

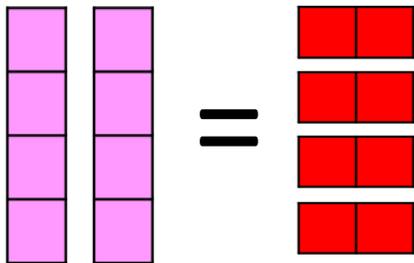
## 3 Faire des bonds



$$4 \times 2 = 8$$

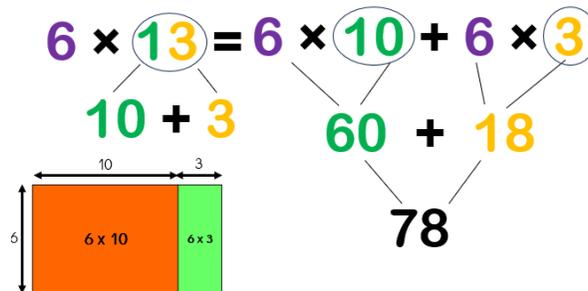
Je fais des bonds en avançant toujours du même nombre.

## 4 Utiliser la commutativité



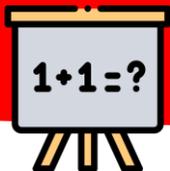
Si je sais que  $2 \times 4 = 8$  alors  $4 \times 2 = 8$  aussi.

## 5 Utiliser la distributivité



Je décompose les nombres puis je multiplie les dizaines et les unités.

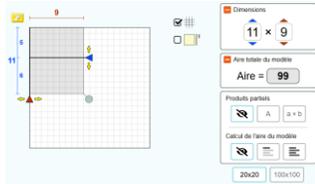
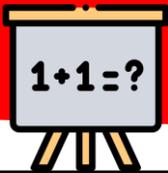
## 6



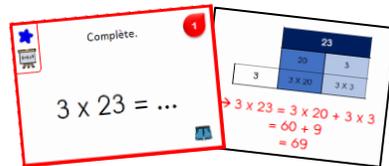
Pour multiplier en ligne deux nombres, on décompose le plus grand nombre.

Ensuite on multiplie les dizaines puis les unités et on rassemble tout.

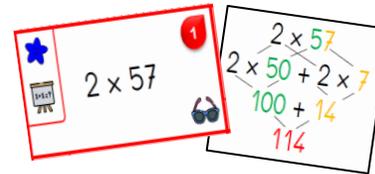
# C32: Multiplier en ligne (2)



**Phet: Area model multiplication**



**Cartes short**



**Cartes lunettes**

