

Let's Learn

Student's Book p.182

a There are 18 students in each class.

How many students are there in 3 classes?



Use the distributive law of multiplication to write 18×3 as 10×3 and 8×3 .



$$\begin{array}{r} 2 \\ \times 18 \\ \hline 54 \end{array}$$

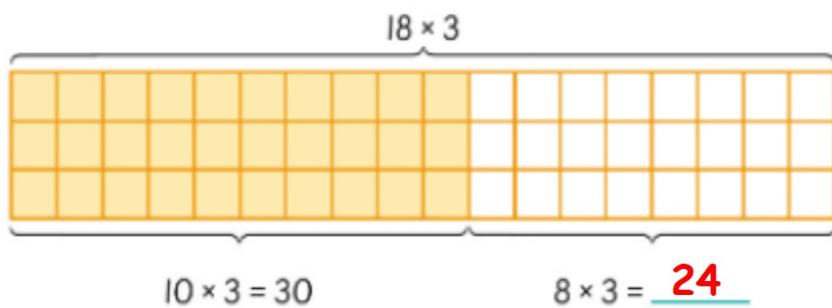
We can estimate the product before multiplying the numbers.

18 is close to 20.

$20 \times 3 = 60$.

The product is about 60.

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$$30 + \underline{24} = \underline{54}$$

So $18 \times 3 = \underline{54}$.

$$\begin{array}{r} 18 \\ \times 3 \\ \hline 54 \end{array}$$

18 x 3 = 54

There are 54 students in 3 classes.

$$3 \times 10 = 30$$

$$3 \times 8 = 24$$

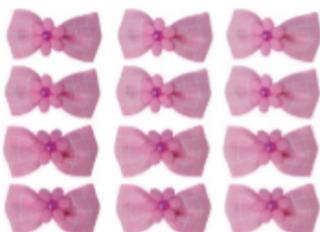
$$30 + 24 = 54$$

We break down the 18 into 10 and 8 and then multiply the 3 with the 10 then multiply the 3 with the 8 and add both products together

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b Caz makes 12 bows every day.

How many bows does she make in 4 days?



Estimate the product first.

12 is close to 10.

$$10 \times 4 = 40.$$

The product is about 40.

$$\begin{aligned} 12 \times 4 &= 12 \times 2 \times 2 \\ &= 24 \times 2 \\ &= \underline{\underline{48}} \end{aligned}$$

$$\begin{aligned} 12 &= 10 + 2 \\ \text{double 12} &= \text{double 10} + \text{double 2} \\ &= 20 + 4 \\ &= 24 \end{aligned}$$

$$\begin{array}{r} 12 \\ \times 4 \\ \hline 48 \end{array}$$

$$10 \times 4 = 40$$

$$2 \times 4 = 8$$

$$40 + 8 = 48$$



Caz makes 48 bows in 4 days.

We break down the 12 into 10 and 2 and then multiply the 4 with the 10 then multiply the 4 with the 2 and add both products together

$$\begin{array}{r} 12 \\ \times 4 \\ \hline 48 \end{array}$$

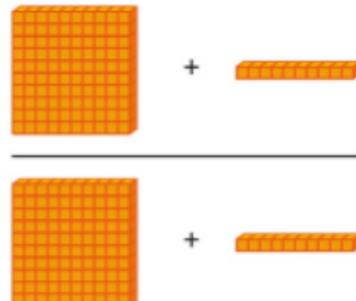
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c Each bus can carry 22 people.
How many people can 5 buses carry?

Multiply a number by 5 is the same as multiply the number by 10 and then half it.



$$\begin{aligned}
 22 \times 5 &= 22 \times 10 \div 2 \\
 &= 220 \div 2 \\
 &= \text{Half of } 200 + \text{Half of } 20 \\
 &= 100 + 10 \\
 &= 110
 \end{aligned}$$



5 buses can carry 110 people.

18

We replace 5 by $(10 \div 2)$
we then can multiply 22×10 giving us the product 220
then we divide 220 by 2 (which is taking the half of it)

$$\begin{array}{r}
 22 \times 5 = \\
 \swarrow \quad \searrow \\
 20 \quad 2
 \end{array}$$

$$\begin{array}{r}
 1 \\
 22 \\
 \times \quad 5 \\
 \hline
 110
 \end{array}$$

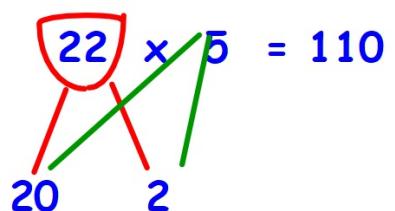
way 1

vertical
distribution
multiplication

$$\begin{array}{r} \text{tens} \quad \text{ones} \\ \text{2} \quad \text{2} \\ \times \quad \text{5} \\ \hline 1 \quad 1 \quad 0 \end{array}$$

multiply the ones first
then multiply the tens

way 2


$$22 \times 5 = 110$$

$$\begin{aligned} 20 \times 5 &= 100 \\ 2 \times 5 &= 10 \\ 100 + 10 &= 110 \end{aligned}$$