Multiplying 2-Digit Numbers

Lesson 1

In Focus

20 oranges

20 oranges

20 oranges

20 oranges
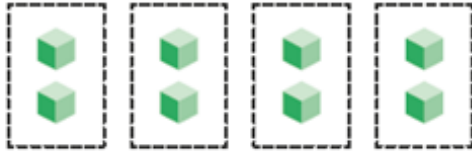
How many oranges are there in the 4 boxes altogether?

Think about what altogether means...

We need to work out how many oranges there are in all of the boxes.

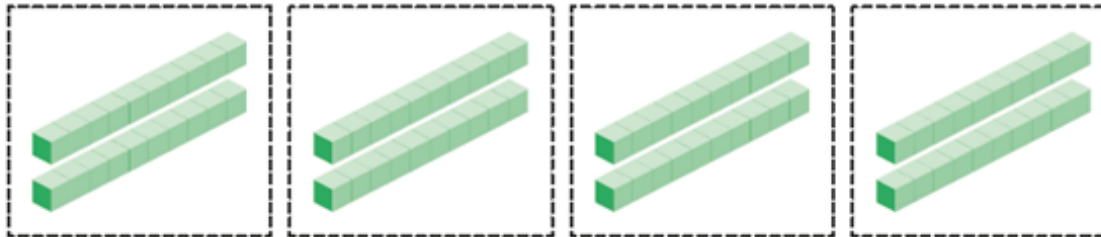20 x 4 = ?   Use 2 x 4 to help you. How is this going to help you work out 20 x 4?

Let's Learn

1

Multiply 2 ones by 4
$2 \times 4 = 8$

$$
\begin{array}{cr}
 & \mathbf{o} \\
 & 2 \\
\times & 4 \\
\hline
 & 8 \\
\hline
\end{array}
$$

2

Multiply 2 tens by 4
$20 \times 4 = 80$

$$
\begin{array}{crr}
 & \mathbf{t} & \mathbf{o} \\
 & 2 & 0 \\
\times & & 4 \\
\hline
 & 8 & 0 \\
\hline
\end{array}
$$

There are 80 oranges in the 4 boxes altogether.

Guided Practice

Multiply.

1 $3 \times 4 = \boxed{}$
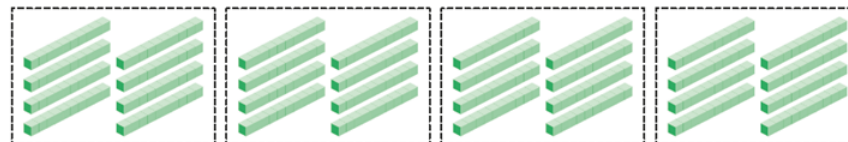
$3 \times 40 = \boxed{}$

3 × 4 tens
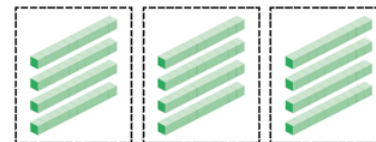
Think about the method we have just seen. How can this help you?

Use the pictures to help you too.

4 × 8 tens

2 $4 \times 8 = \boxed{}$

$4 \times 80 = \boxed{}$

3 $3 \times 20 = \boxed{}$

$3 \times 40 = \boxed{}$

$3 \times 80 = \boxed{}$

What is 3 × 30?

Complete Worksheet 1 · Page 115 – 116

Guided Practice

Multiply.

1 $3 \times 4 = 12$

$3 \times 40 = 120$

3×4 tens

2 $4 \times 8 = 32$

$4 \times 80 = 320$

4×8 tens

3 $3 \times 20 = 60$
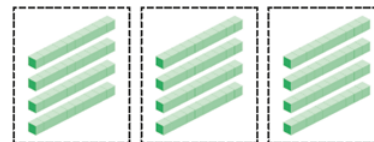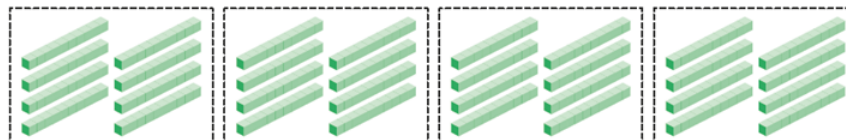
$3 \times 40 = 120$

$3 \times 80 = 240$

What is 3×30?

90

Complete Worksheet 1 · Page 115 – 116

Further Multiplication and Division

Name: _____ Class: _____ Date: _____

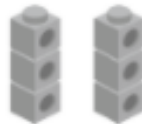## Worksheet 1

Multiplying 2-Digit Numbers

1 Multiply.

(a) $2 \times 3 =$ [ ]

$2 \times 30 =$ [ ]

(b) $5 \times 4 =$ [ ]

$5 \times 40 =$ [ ]

(c) $6 \times 8 =$ [ ]

$60 \times 8 =$ [ ]

(d) $9 \times 3 =$ [ ]

$90 \times 3 =$ [ ]

2 Multiply and fill in the blanks.

(a) $4 \times 30 =$ ☐   (b) $8 \times 20 =$ ☐

$4 \times 50 =$ ☐ $8 \times 40 =$ ☐

$4 \times 70 =$ ☐ $8 \times 60 =$ ☐

$4 \times 80 =$ ☐ $8 \times 80 =$ ☐

$4 \times 100 =$ ☐ $8 \times 90 =$ ☐

(c) $30 \times 3 =$ ☐   (d) $40 \times 3 =$ ☐

$30 \times 5 =$ ☐ $40 \times 4 =$ ☐

$30 \times 7 =$ ☐ $40 \times 6 =$ ☐

$30 \times 8 =$ ☐ $40 \times 7 =$ ☐

$30 \times 10 =$ ☐ $40 \times 9 =$ ☐

Further Multiplication and Division

Name: _____ Class: _____ Date: _____

Worksheet 1

Multiplying 2-Digit Numbers

1 Multiply.

(a) $2 \times 3 =$ 6

$2 \times 30 =$ 60

(b) $5 \times 4 =$ 20

$5 \times 40 =$ 200

(c) $6 \times 8 =$ 48

$60 \times 8 =$ 480

(d) $9 \times 3 =$ 27

$90 \times 3 =$ 270

2 Multiply and fill in the blanks.

(a) $4 \times 30 =$ 120

 $4 \times 50 =$ 200

 $4 \times 70 =$ 280

 $4 \times 80 =$ 320

 $4 \times 100 =$ 400

(b) $8 \times 20 =$ 160

 $8 \times 40 =$ 320

 $8 \times 60 =$ 480

 $8 \times 80 =$ 640

 $8 \times 90 =$ 720

(c) $30 \times 3 =$ 90

 $30 \times 5 =$ 150

 $30 \times 7 =$ 210

 $30 \times 8 =$ 240

 $30 \times 10 =$ 300

(d) $40 \times 3 =$ 120

 $40 \times 4 =$ 160

 $40 \times 6 =$ 240

 $40 \times 7 =$ 280

 $40 \times 9 =$ 360

Further Multiplication and Division   Page 116

1)

Complete the fact family for this calculation:
If we know that 2 × 6 = 12, we also know that...

Can you do the same for these calculations:

2 × 60 = 120	..... × ..... = ...
..... ÷ ..... = ...	..... ÷ ..... = ...

- 3 × 30 = ☐
- ☐ = 4 × 80
- 160 ÷ 2 = ☐

2)

I know that when multiplying 3 × 40, 40 is ten times bigger than 4, so my answer will also be ten times bigger.

Is Saif correct?
Prove it.

3) Erica has written some number sentences about a fact family, but she's made a mistake.
Find and explain her mistake

2 x 8 = 16	20 x 8 = 160
8 x 2 = 16	80 x 2 = 16
16 ÷ 8 = 2	160 ÷ 80 = 3
16 ÷ 2 = 8	160 ÷ 2 = 80

4) Chloe has 240 cakes to sell.
Boxes come in different sizes and can hold different multiples of 10.
Which boxes could she use, making sure all boxes are full and there are no cakes left over?

10   20   30   40
50   60   80   100

5) True or false?   Prove it!

$$5 \times 30 = 3 \times 50$$

6) Hamza says,

My array shows 2 x 4.

10 10 10 10
10 10 10 10

Do you agree? Explain why.

1)

Complete the fact family for this calculation:
If we know that 2 × 6 = 12, we also know that…

Can you do the same for these calculations:

2 × 60 = 120	**60 x 2 = 120**
120 ÷ 60 = 2	**120 ÷ 2 = 60**

- 3 × 30 = ☐
- ☐ = 4 × 80
- 160 ÷ 2 = ☐

2)

I know that when multiplying 3 x 40, 40 is ten times bigger than 4, so my answer will also be ten times bigger.

Is Saif correct? Prove it.

Saif is correct. I know 3 × 4 = 12, so if he has 3 × 40 then his answer will be ten times bigger because 4 has become ten times bigger.

3) Erica has written some number sentences about a fact family, but she's made a mistake. Find and explain her mistake

2 x 8 = 16	20 x 8 = 160
8 x 2 = 16	80 x 2 = 16
16 ÷ 8 = 2	160 ÷ 80 = 3
16 ÷ 2 = 8	160 ÷ 2 = 80

Erica has made a mistake because she has put 80 x 2 = 16.
We know that 8 x 2 = 16, and we know that 80 is 10 times bigger than 8, so the answer also needs to be 10 times bigger.
The correct answer is 80 x 2 = 160.

4) Chloe has 240 cakes to sell.
Boxes come in different sizes and can hold different multiples of 10.
Which boxes could she use, making sure all boxes are full and there are no cakes left over?

Boxes: 10, 20, 30, 40, 50, 60, 80, 100

She could use 10, 20, 30, 40, 60, 80 because 240 is a multiple of all of these numbers.
10 × 24 = 240
20 × 12 = 240
30 × 8 = 240
40 × 6 = 240
60 × 4 = 240
80 × 3 = 240

5) True or false?
Prove it!

5 x 30 = 3 x 50

True because they are equal.

6) Hamza says,

My array shows 2 x 4.

Do you agree? Explain why.

Hamza is incorrect because each duck in his array is worth ten.
The correct answer is 20 x 4 or 40 x 2 giving an answer of 80.