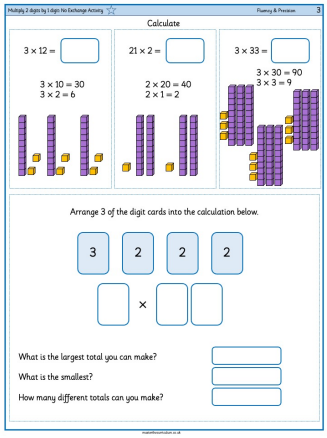
Lesson 1 – Multiply 2-digits by 1-digit Activity : No exchange

NC Objective:	Resources needed:	Vocabulary:
Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Differentiated Sheets Teaching Slides Base 10	Multiplication, repeated addition, partition

Children explore multiplying 2-digits by 1-digit using equipment. They will not exchange in this lesson. Children will use equipment and partitioning to calculate the answers.

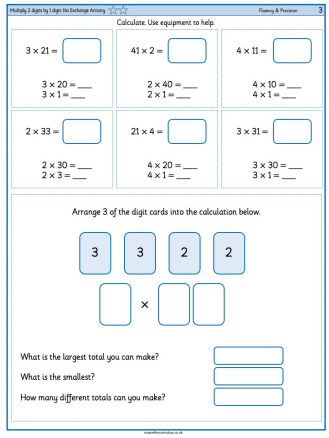
Key Questions:
What does partitioning mean?
Partition 32 into tens and ones.
How many times do we need to repeat this number? Why?

★ Working Towards



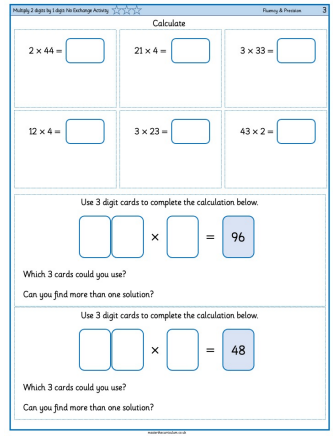
Children on this sheet have pictorial images to guide them on the equipment to use. They investigate different digit cards and calculations they can make.

★★ Working Within



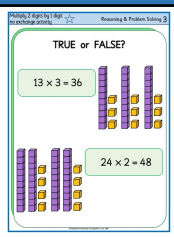
Children on this sheet do not have pictorial images to guide them, they are expected to find the correct equipment to use. They investigate different digit cards and calculations they can make.

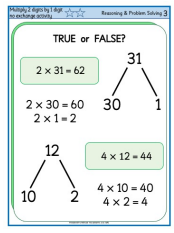
★★★ Greater Depth

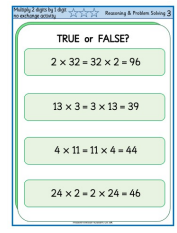


Children on this sheet will explain the partitioning under the calculation. They investigate what digits can be used to total 96 and 48.

Reasoning & Problem Solving



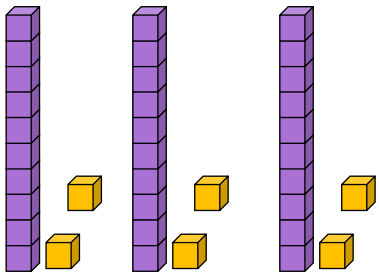




Calculate

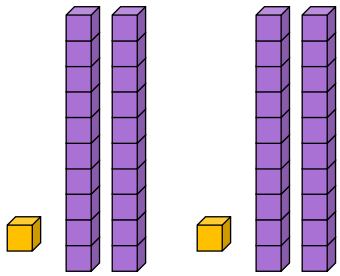
$3 \times 12 =$ ☐

$3 \times 10 = 30$
$3 \times 2 = 6$



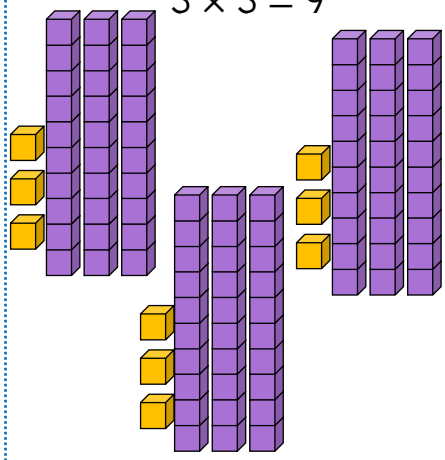
$21 \times 2 =$ ☐

$2 \times 20 = 40$
$2 \times 1 = 2$



$3 \times 33 =$ ☐

$3 \times 30 = 90$
$3 \times 3 = 9$



Arrange 3 of the digit cards into the calculation below.

3	2	2	2

☐☐ × ☐

What is the largest total you can make? ☐

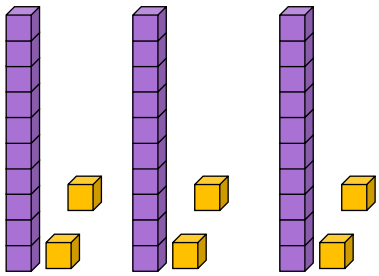
What is the smallest? ☐

How many different totals can you make? ☐

Calculate

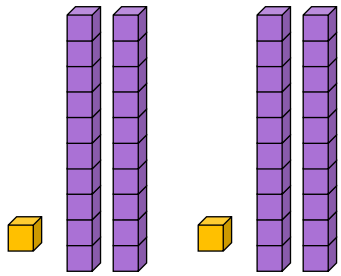
$3 \times 12 =$ 36

$3 \times 10 = 30$
$3 \times 2 = 6$



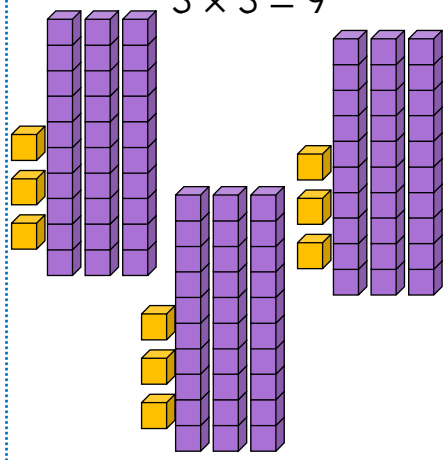
$21 \times 2 =$ 42

$2 \times 20 = 40$
$2 \times 1 = 2$



$3 \times 33=$ 99

$3 \times 30 = 90$
$3 \times 3 = 9$



Arrange 3 of the digit cards into the calculation below.

$2 \times 22 = 44$
$2 \times 23 = 46$
$2 \times 32 = 64$

3	2	2	2

$3 \times 22 = 66$

$\square \times \square\square$

What is the largest total you can make? 66

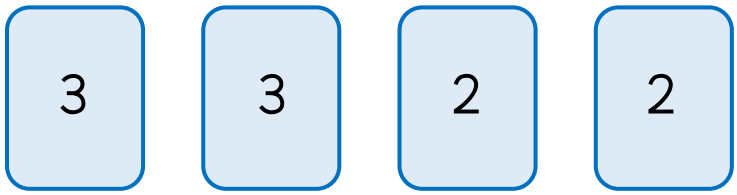
What is the smallest? 44

How many different totals can you make? 4

Calculate. Use equipment to help.

$3 \times 21 =$ ☐ $3 \times 20 =$ ___ $3 \times 1 =$ ___	$41 \times 2 =$ ☐ $2 \times 40 =$ ___ $2 \times 1 =$ ___	$4 \times 11 =$ ☐ $4 \times 10 =$ ___ $4 \times 1 =$ ___
$2 \times 33 =$ ☐ $2 \times 30 =$ ___ $2 \times 3 =$ ___	$21 \times 4 =$ ☐ $4 \times 20 =$ ___ $4 \times 1 =$ ___	$3 \times 31 =$ ☐ $3 \times 30 =$ ___ $3 \times 1 =$ ___

Arrange 3 of the digit cards into the calculation below.



☐ × ☐☐

What is the largest total you can make? ☐

What is the smallest? ☐

How many different totals can you make? ☐

Calculate. Use equipment to help.

$3 \times 21 =$ 63

$3 \times 20 =$ 60
$3 \times 1 =$ 3

$41 \times 2 =$ 82

$2 \times 40 =$ 80
$2 \times 1 =$ 2

$4 \times 11 =$ 44

$4 \times 10 =$ 40
$4 \times 1 =$ 4

$2 \times 33 =$ 66

$2 \times 30 =$ 60
$2 \times 3 =$ 6

$21 \times 4 =$ 84

$4 \times 20 =$ 80
$4 \times 1 =$ 4

$3 \times 31 =$ 93

$3 \times 30 =$ 90
$3 \times 1 =$ 3

Arrange 3 of the digit cards into the calculation below.

$2 \times 23 = 46$
$2 \times 32 = 64$
$2 \times 33 = 66$

3 3 2 2

$3 \times 22 = 66$
$3 \times 23 = 69$
$3 \times 32 = 96$

□ × □□

What is the largest total you can make? 96

What is the smallest? 46

How many different totals can you make? 5

Calculate

$2 \times 44 =$ ☐	$21 \times 4 =$ ☐	$3 \times 33 =$ ☐
$12 \times 4 =$ ☐	$3 \times 23 =$ ☐	$43 \times 2 =$ ☐

Use 3 digit cards to complete the calculation below.

☐☐ × ☐ = 96

Which 3 cards could you use?

Can you find more than one solution?

Use 3 digit cards to complete the calculation below.

☐☐ × ☐ = 48

Which 3 cards could you use?

Can you find more than one solution?

Calculate

$2 \times 44 =$ **88**

$2 \times 40 = 80$
$2 \times 4 = 8$

$21 \times 4 =$ **84**

$4 \times 20 = 80$
$4 \times 1 = 4$

$3 \times 33 =$ **99**

$3 \times 30 = 90$
$3 \times 3 = 9$

$12 \times 4 =$ **48**

$4 \times 10 = 40$
$4 \times 2 = 8$

$3 \times 23 =$ **69**

$3 \times 20 = 60$
$3 \times 3 = 9$

$43 \times 2 =$ **86**

$2 \times 40 = 80$
$2 \times 3 = 6$

Use 3 digit cards to complete the calculation below.

Possible answers:
$1 \times 96 = 96$
$3 \times 32 = 96$

$\square\square \times \square = 96$

Which 3 cards could you use?

Can you find more than one solution?

Use 3 digit cards to complete the calculation below.

Possible answers:
$1 \times 48 = 48$
$2 \times 24 = 48$
$4 \times 12 = 48$

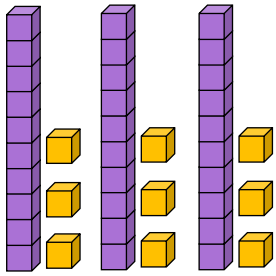
$\square\square \times \square = 48$

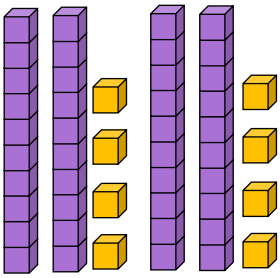
Which 3 cards could you use?

Can you find more than one solution?

TRUE or FALSE?

13 × 3 = 36



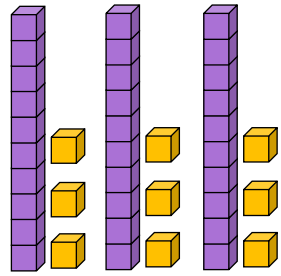


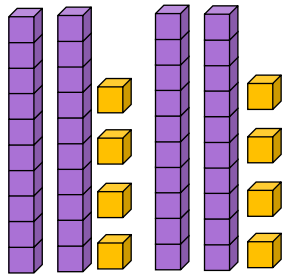
24 × 2 = 48

Multiply 2 digits by 1 digit no exchange activity
Reasoning & Problem Solving 3

TRUE or FALSE?

13 × 3 = 36





24 × 2 = 48

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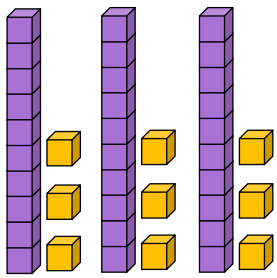
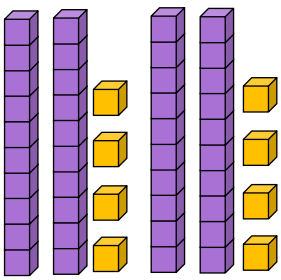
Multiply 2 digits by 1 digit no exchange activity
Reasoning & Problem Solving 3

TRUE or FALSE?

13 × 3 = 36





24 × 2 = 48

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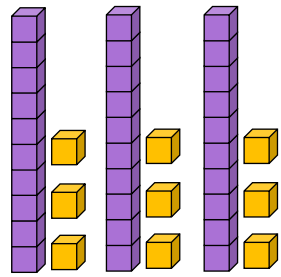
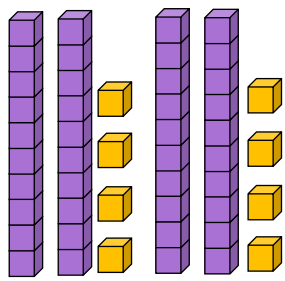
Multiply 2 digits by 1 digit no exchange activity
Reasoning & Problem Solving 3

TRUE or FALSE?

13 × 3 = 36





24 × 2 = 48

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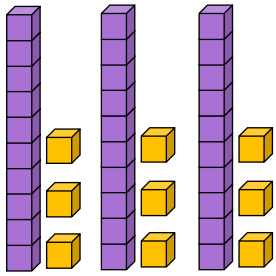
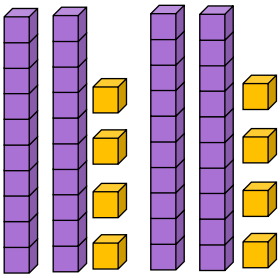
Answers

TRUE or FALSE?

13 × 3 = 36

False





24 × 2 = 48

True

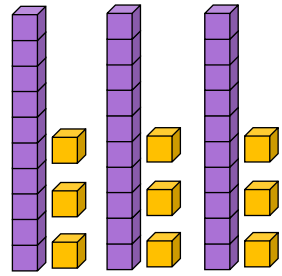
Multiply 2 digits by 1 digit no exchange activity
Reasoning & Problem Solving 3

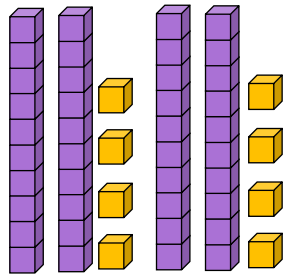
Answers

TRUE or FALSE?

13 × 3 = 36

False





24 × 2 = 48

True

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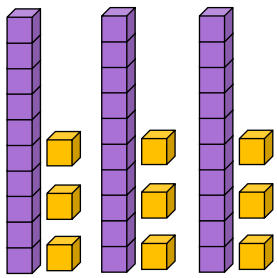
Multiply 2 digits by 1 digit no exchange activity
Reasoning & Problem Solving 3

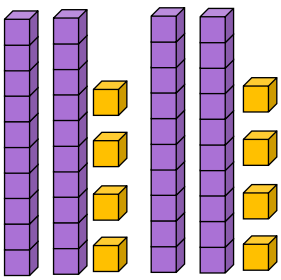
Answers

TRUE or FALSE?

13 × 3 = 36

False





24 × 2 = 48

True

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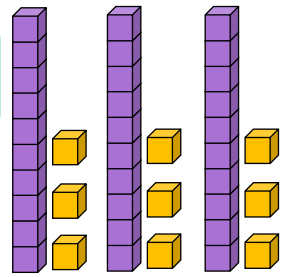
Multiply 2 digits by 1 digit no exchange activity
Reasoning & Problem Solving 3

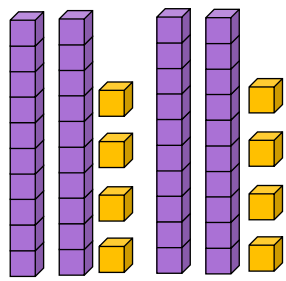
Answers

TRUE or FALSE?

13 × 3 = 36

False





24 × 2 = 48

True

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TRUE or FALSE?

$2 \times 31 = 62$

31

30 1

$2 \times 30 = 60$
$2 \times 1 = 2$

12

10 2

$4 \times 12 = 44$

$4 \times 10 = 40$
$4 \times 2 = 4$

Multiply 2 digits by 1 digit
no exchange activity ☆☆ Reasoning & Problem Solving 3

TRUE or FALSE?

2 × 31 = 62

31

30 1

2 × 30 = 60
2 × 1 = 2

12

10 2

4 × 12 = 44

4 × 10 = 40
4 × 2 = 4

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Multiply 2 digits by 1 digit
no exchange activity ☆☆ Reasoning & Problem Solving 3

TRUE or FALSE?

2 × 31 = 62

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2 × 30 = 60
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10 2

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Multiply 2 digits by 1 digit
no exchange activity ☆☆ Reasoning & Problem Solving 3

TRUE or FALSE?

2 × 31 = 62

31

30 1

2 × 30 = 60
2 × 1 = 2

12

10 2

4 × 12 = 44

4 × 10 = 40
4 × 2 = 4

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Answers

TRUE or FALSE?

$2 \times 31 = 62$

True

31 → 30 and 1

$2 \times 30 = 60$

$2 \times 1 = 2$

12 → 10 and 2

$4 \times 12 = 44$

False

$4 \times 10 = 40$

$4 \times 2 = 4$

Multiply 2 digits by 1 digit
no exchange activity ☆☆ Reasoning & Problem Solving 3
Answers
TRUE or FALSE?
2 × 31 = 62
True
31 → 30 and 1
2 × 30 = 60
2 × 1 = 2
12 → 10 and 2
4 × 12 = 44
False
4 × 10 = 40
4 × 2 = 4
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Multiply 2 digits by 1 digit
no exchange activity ☆☆ Reasoning & Problem Solving 3
Answers
TRUE or FALSE?
2 × 31 = 62
True
31 → 30 and 1
2 × 30 = 60
2 × 1 = 2
12 → 10 and 2
4 × 12 = 44
False
4 × 10 = 40
4 × 2 = 4
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Multiply 2 digits by 1 digit
no exchange activity ☆☆ Reasoning & Problem Solving 3
Answers
TRUE or FALSE?
2 × 31 = 62
True
31 → 30 and 1
2 × 30 = 60
2 × 1 = 2
12 → 10 and 2
4 × 12 = 44
False
4 × 10 = 40
4 × 2 = 4
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TRUE or FALSE?

$2 \times 32 = 32 \times 2 = 96$

$13 \times 3 = 3 \times 13 = 39$

$4 \times 11 = 11 \times 4 = 44$

$24 \times 2 = 2 \times 24 = 46$

Multiply 2 digits by 1 digit
no exchange activity ☆☆☆ Reasoning & Problem Solving 3

TRUE or FALSE?

2 × 32 = 32 × 2 = 96

13 × 3 = 3 × 13 = 39

4 × 11 = 11 × 4 = 44

24 × 2 = 2 × 24 = 46

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Multiply 2 digits by 1 digit
no exchange activity ☆☆☆ Reasoning & Problem Solving 3

TRUE or FALSE?

2 × 32 = 32 × 2 = 96

13 × 3 = 3 × 13 = 39

4 × 11 = 11 × 4 = 44

24 × 2 = 2 × 24 = 46

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Multiply 2 digits by 1 digit
no exchange activity ☆☆☆ Reasoning & Problem Solving 3

TRUE or FALSE?

2 × 32 = 32 × 2 = 96

13 × 3 = 3 × 13 = 39

4 × 11 = 11 × 4 = 44

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Answers

TRUE or FALSE?

$2 \times 32 = 32 \times 2 = 96$

False

$13 \times 3 = 3 \times 13 = 39$

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$4 \times 11 = 11 \times 4 = 44$

True

$24 \times 2 = 2 \times 24 = 46$

False

Multiply 2 digits by 1 digit
no exchange activity
Reasoning & Problem Solving 3

Answers

TRUE or FALSE?

$2 \times 32 = 32 \times 2 = 96$

False

$13 \times 3 = 3 \times 13 = 39$

True

$4 \times 11 = 11 \times 4 = 44$

True

$24 \times 2 = 2 \times 24 = 46$

False

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Multiply 2 digits by 1 digit
no exchange activity
Reasoning & Problem Solving 3

Answers

TRUE or FALSE?

$2 \times 32 = 32 \times 2 = 96$

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$4 \times 11 = 11 \times 4 = 44$

True

$24 \times 2 = 2 \times 24 = 46$

False

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Multiply 2 digits by 1 digit
no exchange activity
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Answers

TRUE or FALSE?

$2 \times 32 = 32 \times 2 = 96$

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$13 \times 3 = 3 \times 13 = 39$

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$4 \times 11 = 11 \times 4 = 44$

True

$24 \times 2 = 2 \times 24 = 46$

False

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