

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

NC Objective:  
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

Resources needed:  
Differentiated Sheets  
Teaching Slides  
Base 10

Vocabulary:  
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

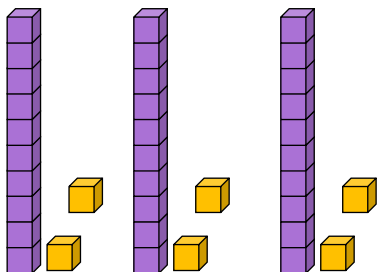


Calculate

$3 \times 12 = \square$

$3 \times 10 = 30$

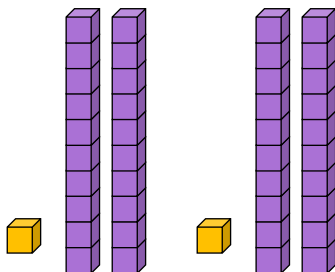
$3 \times 2 = 6$



$21 \times 2 = \square$

$2 \times 20 = 40$

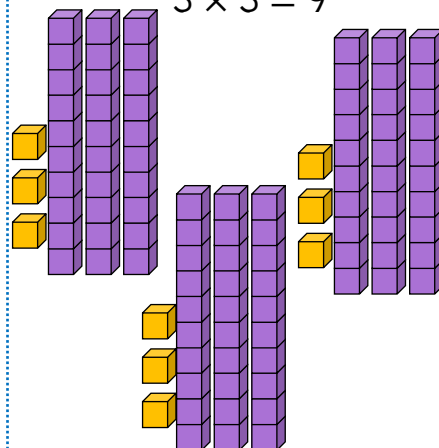
$2 \times 1 = 2$



$3 \times 33 = \square$

$3 \times 30 = 90$

$3 \times 3 = 9$



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?

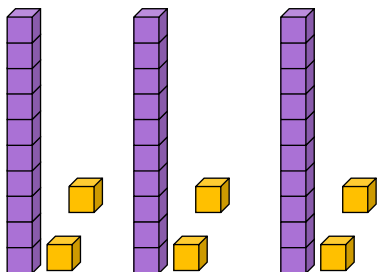
How many different totals can you make?



Calculate

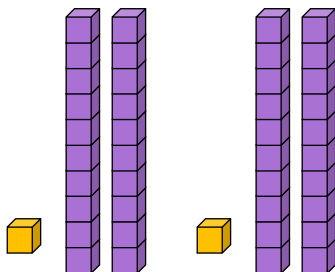
$3 \times 12 = 36$

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



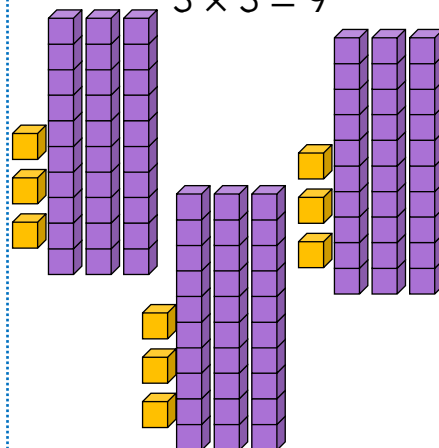
$21 \times 2 = 42$

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



$3 \times 33 = 99$

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



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

$3 \times 22 = 66$

×

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.

$3 \times 21 =$

$3 \times 20 = \underline{\quad}$

$3 \times 1 = \underline{\quad}$

$41 \times 2 =$

$2 \times 40 = \underline{\quad}$

$2 \times 1 = \underline{\quad}$

$4 \times 11 =$

$4 \times 10 = \underline{\quad}$

$4 \times 1 = \underline{\quad}$

$2 \times 33 =$

$2 \times 30 = \underline{\quad}$

$2 \times 3 = \underline{\quad}$

$21 \times 4 =$

$4 \times 20 = \underline{\quad}$

$4 \times 1 = \underline{\quad}$

$3 \times 31 =$

$3 \times 30 = \underline{\quad}$

$3 \times 1 = \underline{\quad}$

Arrange 3 of the digit cards into the calculation below.

3

3

2

2

×



What is the largest total you can make?

What is the smallest?

How many different totals can you make?



Calculate. Use equipment to help.

$3 \times 21 = 63$

$41 \times 2 = 82$

$4 \times 11 = 44$

$3 \times 20 = 60$

$3 \times 1 = 3$

$2 \times 40 = 80$

$2 \times 1 = 2$

$4 \times 10 = 40$

$4 \times 1 = 4$

$2 \times 33 = 66$

$21 \times 4 = 84$

$3 \times 31 = 93$

$2 \times 30 = 60$

$2 \times 3 = 6$

$4 \times 20 = 80$

$4 \times 1 = 4$

$3 \times 30 = 90$

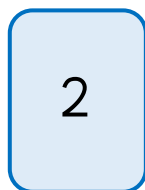
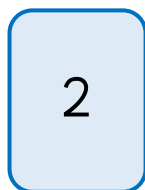
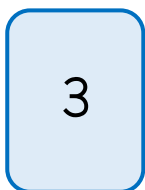
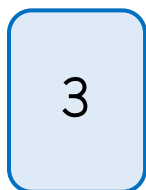
$3 \times 1 = 3$

Arrange 3 of the digit cards into the calculation below.

$2 \times 23 = 46$

$2 \times 32 = 64$

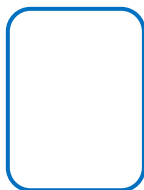
$2 \times 33 = 66$



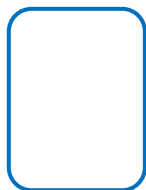
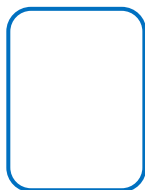
$3 \times 22 = 66$

$3 \times 23 = 69$

$3 \times 32 = 96$



×



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.

$$\boxed{\phantom{00}} \boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{96}$$

Which 3 cards could you use?

Can you find more than one solution?

Use 3 digit cards to complete the calculation below.

$$\boxed{\phantom{00}} \boxed{\phantom{00}} \times \boxed{\phantom{00}} = \boxed{48}$$

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:

$1 \times 48 = 48$

$2 \times 24 = 48$

$4 \times 12 = 48$

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

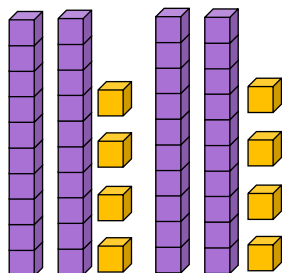
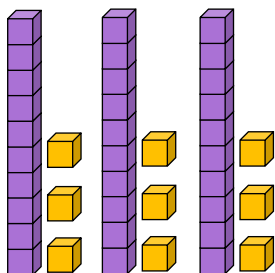
Which 3 cards could you use?

Can you find more than one solution?



### TRUE or FALSE?

$$13 \times 3 = 36$$

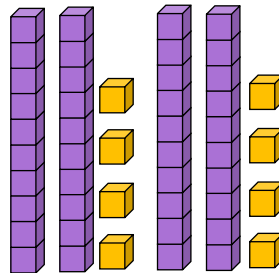
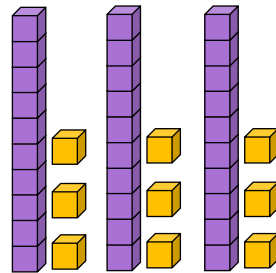


$$24 \times 2 = 48$$



### TRUE or FALSE?

$$13 \times 3 = 36$$

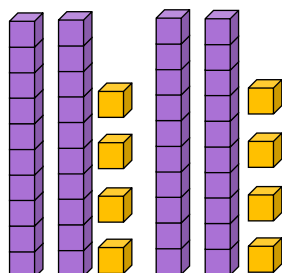
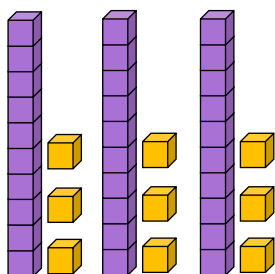


$$24 \times 2 = 48$$



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$$13 \times 3 = 36$$

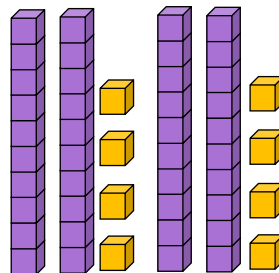
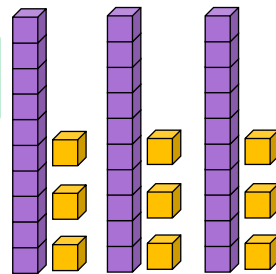


$$24 \times 2 = 48$$



### TRUE or FALSE?

$$13 \times 3 = 36$$



$$24 \times 2 = 48$$

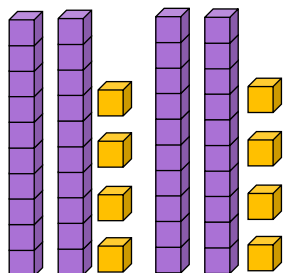
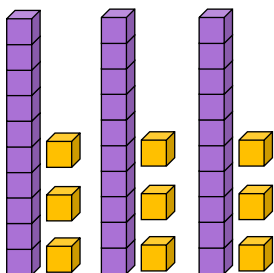


Answers

TRUE or FALSE?

$13 \times 3 = 36$

False



$24 \times 2 = 48$

True

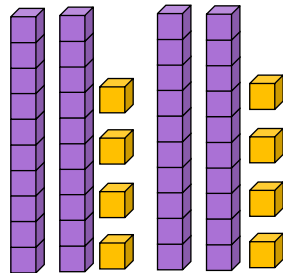
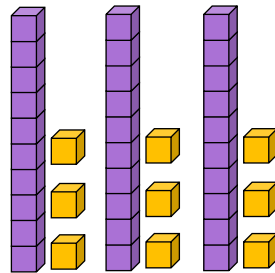


Answers

TRUE or FALSE?

$13 \times 3 = 36$

False



$24 \times 2 = 48$

True

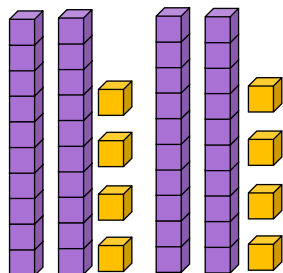
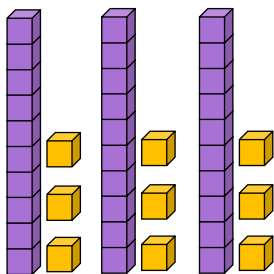


Answers

TRUE or FALSE?

$13 \times 3 = 36$

False



$24 \times 2 = 48$

True

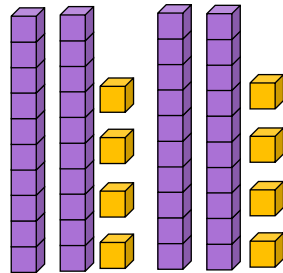
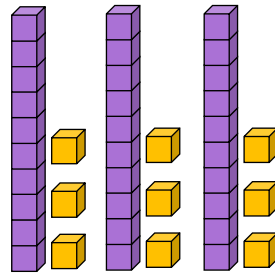


Answers

TRUE or FALSE?

$13 \times 3 = 36$

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$24 \times 2 = 48$

True

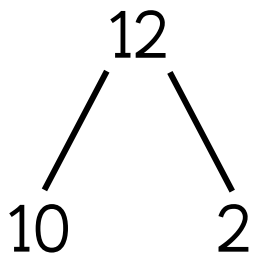
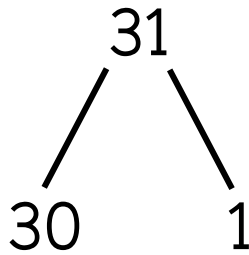


TRUE or FALSE?

$$2 \times 31 = 62$$

$$2 \times 30 = 60$$

$$2 \times 1 = 2$$



$$4 \times 12 = 44$$

$$4 \times 10 = 40$$

$$4 \times 2 = 4$$

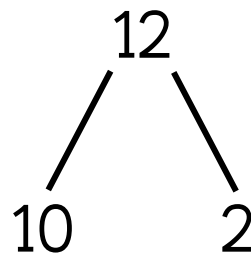
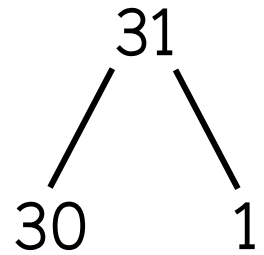


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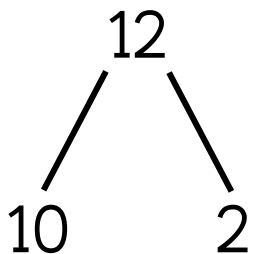
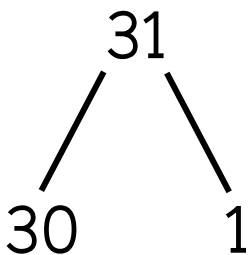


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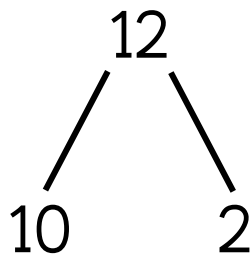
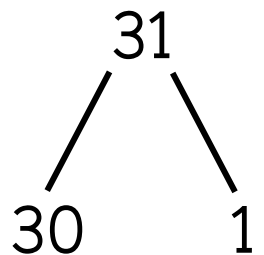


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Answers

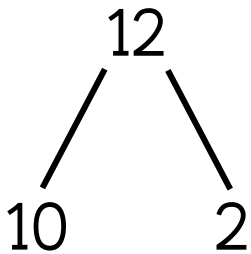
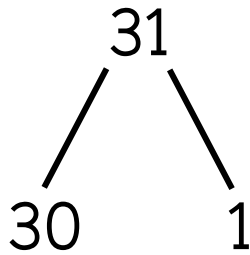
TRUE or FALSE?

$$2 \times 31 = 62$$

True

$$2 \times 30 = 60$$

$$2 \times 1 = 2$$



$$4 \times 12 = 44$$

False

$$4 \times 10 = 40$$

$$4 \times 2 = 4$$



Answers

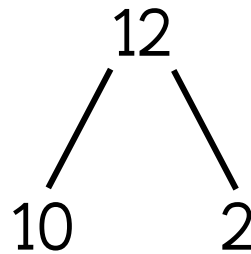
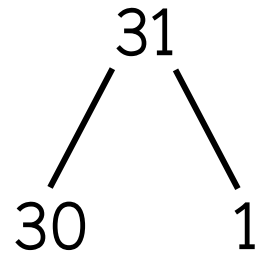
TRUE or FALSE?

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Answers

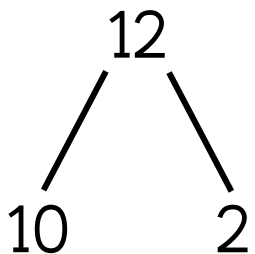
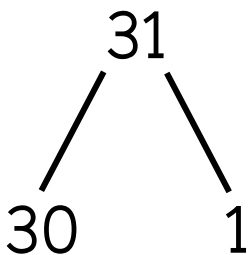
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Answers

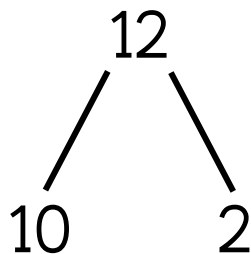
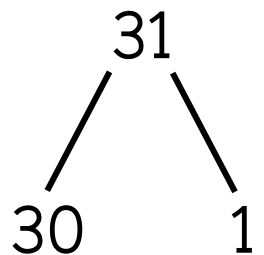
TRUE or FALSE?

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$$2 \times 30 = 60$$

$$2 \times 1 = 2$$



$$4 \times 12 = 44$$

False

$$4 \times 10 = 40$$

$$4 \times 2 = 4$$



### TRUE or FALSE?

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

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

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

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



### TRUE or FALSE?

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

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

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

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



### TRUE or FALSE?

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

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### Answers

TRUE or FALSE?

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False

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### Answers

TRUE or FALSE?

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

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True

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### Answers

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### Answers

TRUE or FALSE?

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False

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True

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True

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False