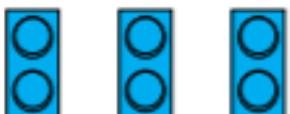


Multiplication Challenge 1

Building Bricks Multiplication

Can you add the bumps on the building bricks to complete these multiplication calculations?

1.  $2 + 2 + 2 = \boxed{}$ $3 \times 2 = \boxed{}$

2.  $4 + 4 = \boxed{}$ $2 \times 4 = \boxed{}$

3.  $3 + 3 = \boxed{}$ $2 \times 3 = \boxed{}$

4.  $3 + 3 + 3 = \boxed{}$ $3 \times 3 = \boxed{}$

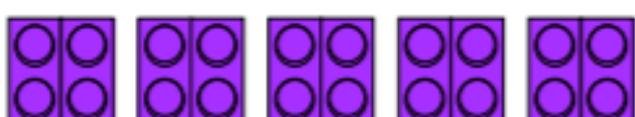
5.  $1 + 1 + 1 + 1 = \boxed{}$ $4 \times 1 = \boxed{}$

6.  $2 + 2 + 2 + 2 + 2 = \boxed{}$ $5 \times 2 = \boxed{}$

7.  $1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 = \boxed{}$ $8 \times 1 = \boxed{}$

8.  $4 + 4 + 4 + 4 = \boxed{}$ $4 \times 4 = \boxed{}$

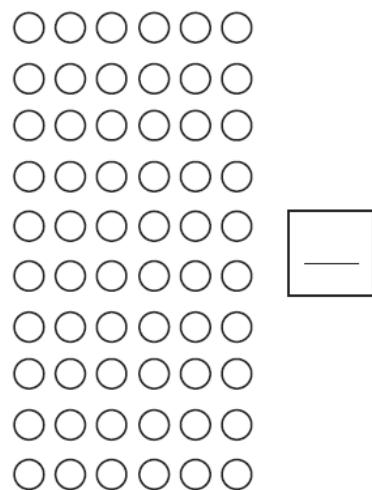
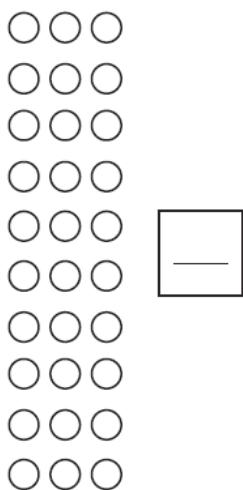
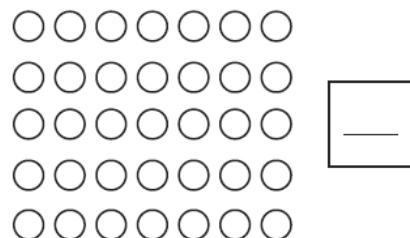
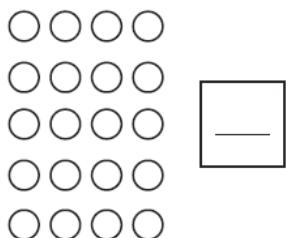
9.  $2 + 2 + 2 + 2 + 2 + 2 = \boxed{}$ $6 \times 2 = \boxed{}$

10.  $4 + 4 + 4 + 4 + 4 = \boxed{}$ $5 \times 4 = \boxed{}$

Introducing Multiplication Arrays

Count in 2s, 5s or 10s to find the total in each array.

Write the total in the box.



Challenge

Draw 12 dots in an array.

Multiplication Challenge 2

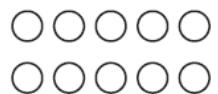
Introducing Multiplication Arrays

Count in 2s, 5s or 10s to find the total in each array.

Write the total in the box.



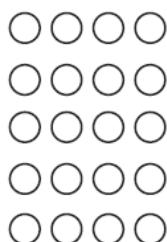
$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$



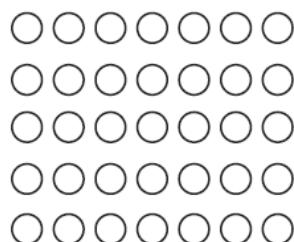
$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$



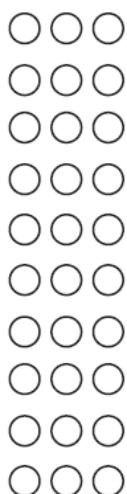
$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$



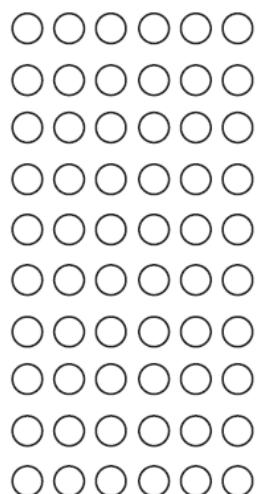
$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$



$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$



$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$



$$\boxed{\underline{\quad} \times \underline{\quad} = \underline{\quad}}$$

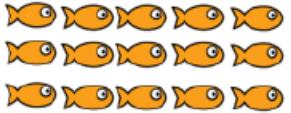
Challenge

Draw an array to show: 2×7

5×3

Multiplication challenge 3

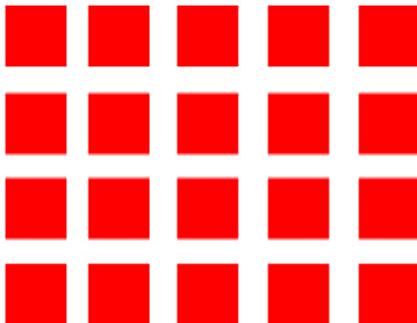
Complete the table

Array	Description - columns	Description - rows	Totals
	5 columns 2 cookies in each column	2 rows 5 cookies in each row	$2 + 2 + 2 + 2 + 2 = 10$ $5 + 5 = 10$ $2 \times 5 = 10$ $5 \times 2 = 10$
	___ columns ___ donuts in each column	___ rows ___ donuts in each row	
	___ columns ___ fish in each column	___ rows ___ fish in each row	
	3 columns 5 cupcakes in each column	5 rows 3 cupcakes in each row	

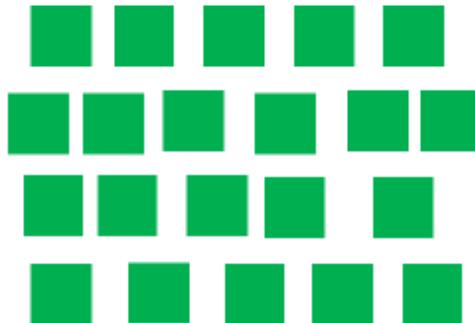
Amir and Whitney are making arrays.



Amir

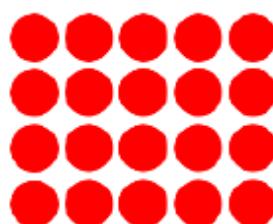


Whitney



Who has made a mistake? Explain why.

Teddy and Alex are writing number sentences to describe the array.



Teddy

$$4 + 4 + 4 + 4 + 4 = 20$$



Alex

$$5 + 5 + 5 + 5 = 20$$

Who do you agree with? Explain why.

Answers: Multiplication Challenge 1

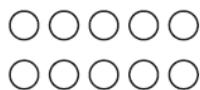
Buliding brick multiplication

question	
1	6
2	8
3	6
4	9
5	4
6	10
7	8
8	16
9	12
10	20

Introducing Multiplication Arrays Answers



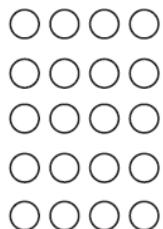
12



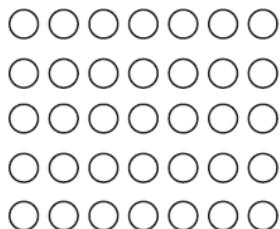
10



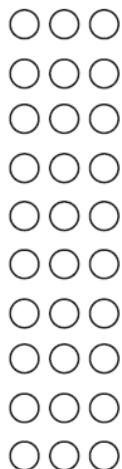
16



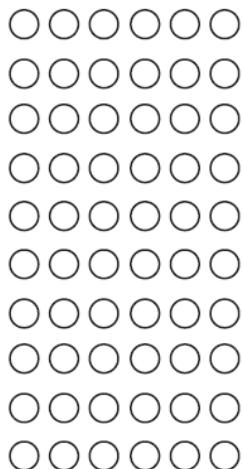
20



35



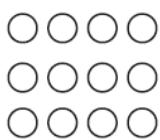
30



60

Challenge

Draw 12 dots in an array.



4×3



6×2



12×1

Answers: Multiplication Challenge 2

Introducing Multiplication Arrays Answers



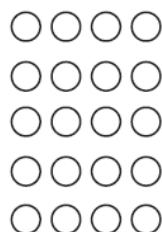
$$6 \times 2 = 12$$



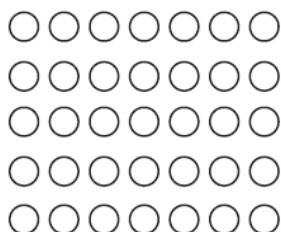
$$5 \times 2 = 10$$



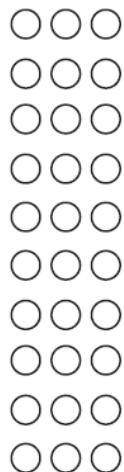
$$8 \times 2 = 16$$



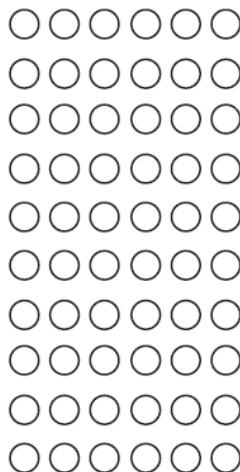
$$4 \times 5 = 20$$



$$7 \times 5 = 35$$



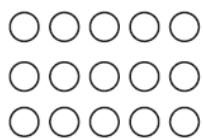
$$3 \times 10 = 30$$



$$6 \times 10 = 60$$

Challenge

Draw an array to show: 5×3 2×7

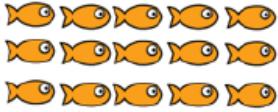
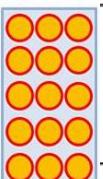


$$5 \times 3$$

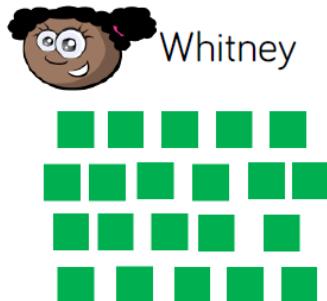
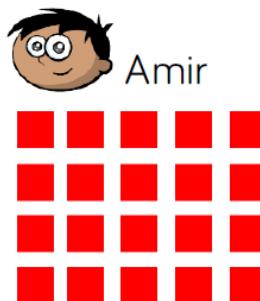


$$2 \times 7$$

Answers: Multiplication Challenge 3

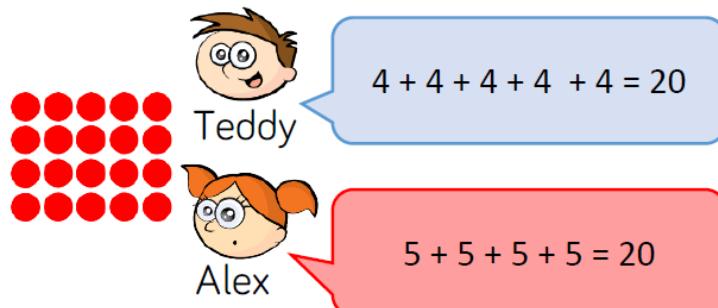
  	2 columns 4 donuts in each column 5 columns 3 fish in each column 3 columns 5 cupcakes in each column	4 rows 2 donuts in each row 3 rows 5 fish in each row 5 rows 3 cupcakes in each row	$4 + 4 = 8$ $2 + 2 + 2 + 2 = 8$ $4 \times 2 = 8$ $2 \times 5 = 10$ $5 \times 2 = 10$ $\text{---} + \text{---} + \text{---} + \text{---} + \text{---}$ $5 + 5 + 5 = 15$ $3 \times 5 = 15$ $5 \times 3 = 15$ $5 + 5 + 5 = 15$ $3 + 3 + 3 + 3 + 3 = 15$ $5 \times 3 = 15$ $3 \times 5 = 15$
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Amir and Whitney are making arrays.



Who has made a mistake? Explain why.

Teddy and Alex are writing number sentences to describe the array.



Possible answer:
 Whitney has made a mistake because her array is not in columns. There are an unequal amount of squares in each row.

Possible answer:
 They are both right. Teddy has counted the columns. Alex has counted the rows.

Who do you agree with? Explain why.