

Mathematics

Understanding multiplication can be completed in any order



OAK
NATIONAL
ACADEMY

Lesson agenda

Recap on arrays



Commutativity



Think about preferred order

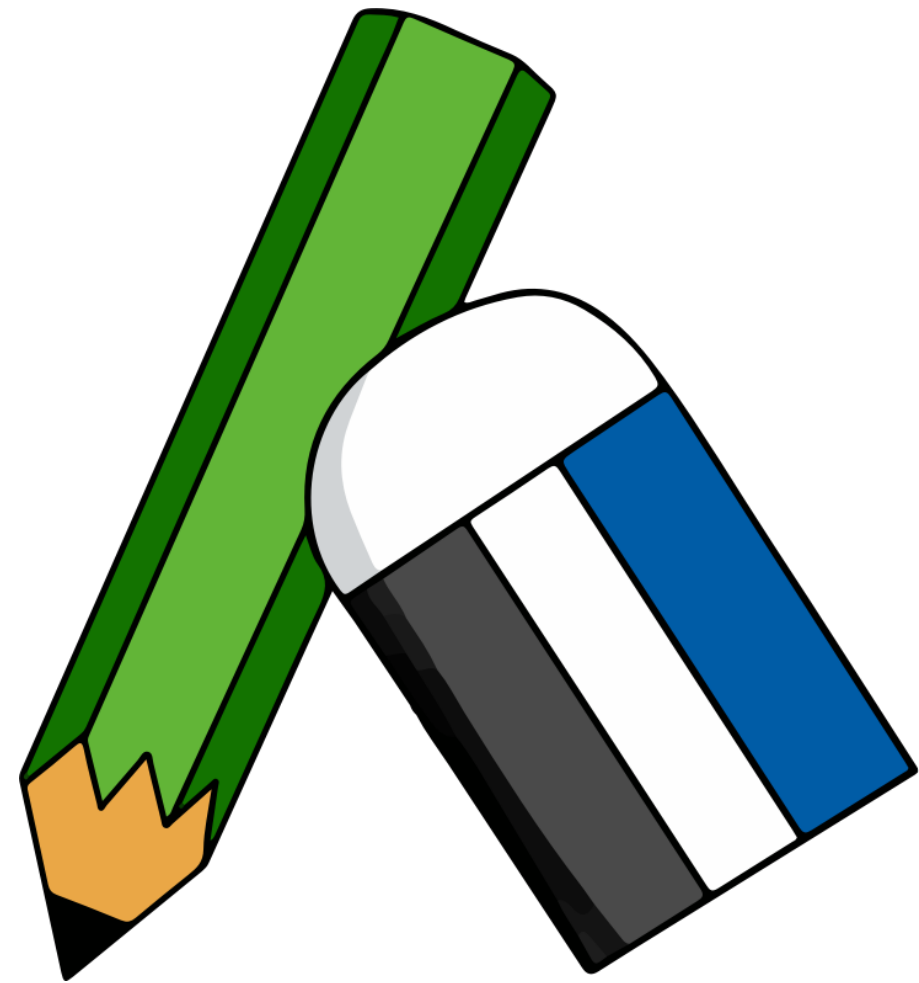


Independent work and Exit quiz



You will need...

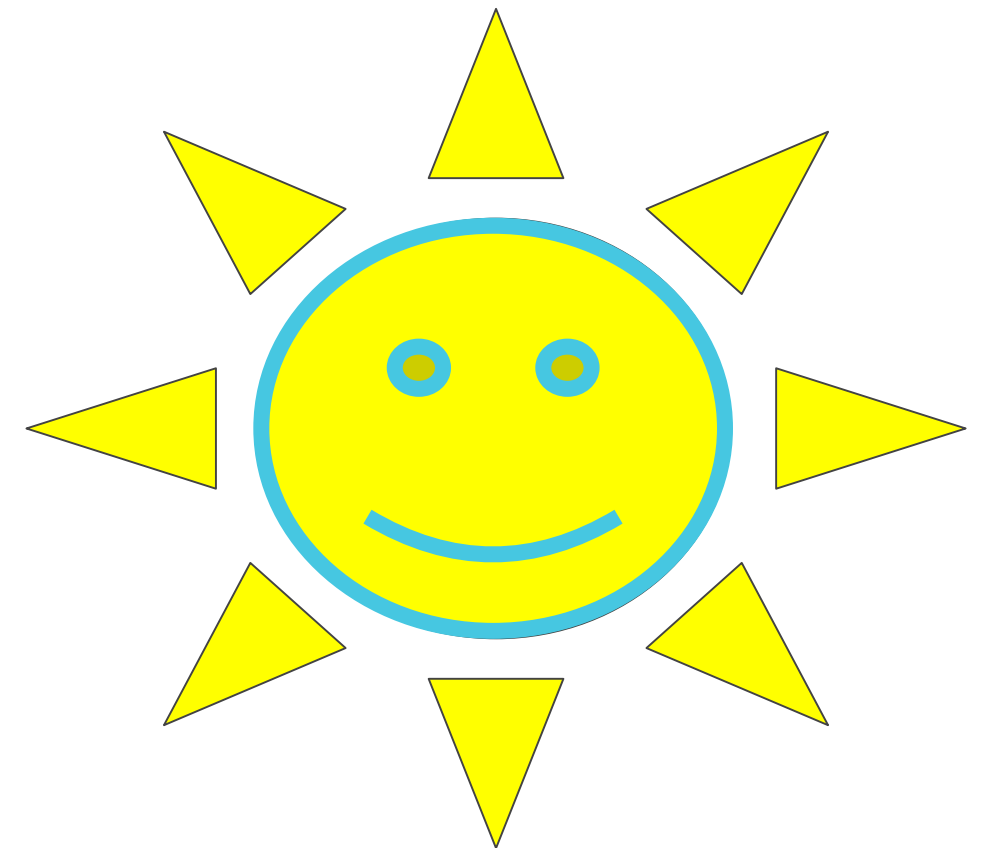
Pencil or pen



Paper

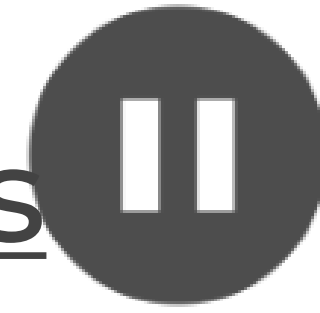


Can do attitude!



Warm-up

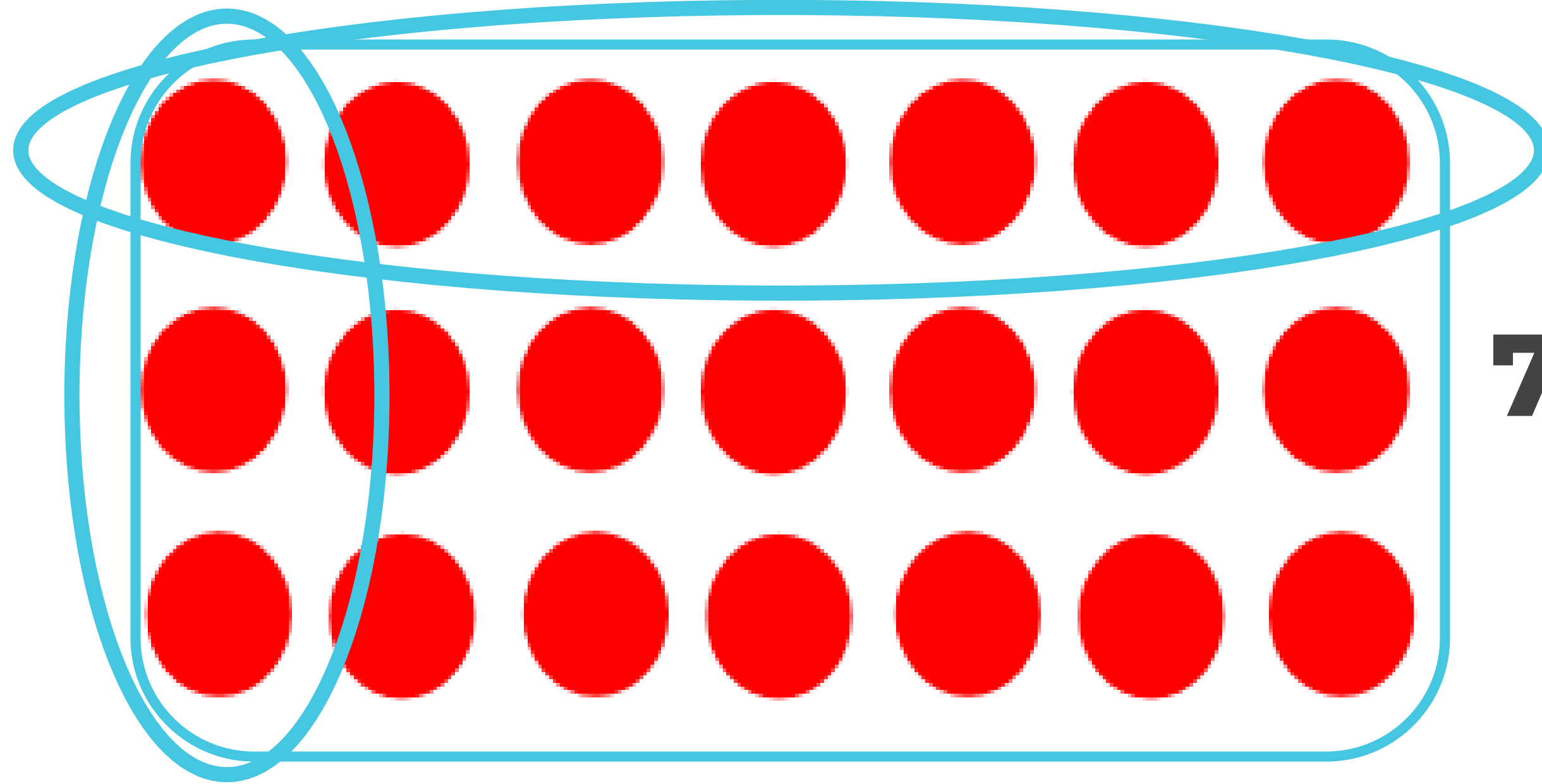
Mentally answer these multiplications



3 x 2 = 6	4 x 4 = 16	6 x 3 = 18
4 x 5 = 20	1 x 3 = 3	9 x 4 = 36
3 x 3 = 9	2 x 4 = 8	3 x 7 = 21



Arrays

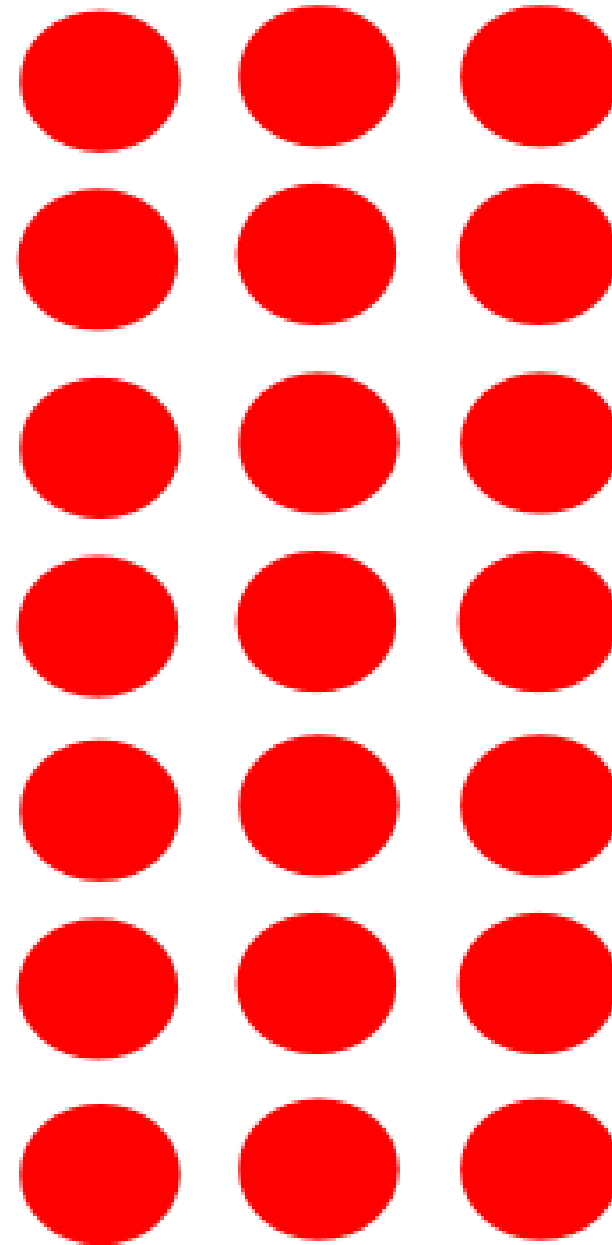
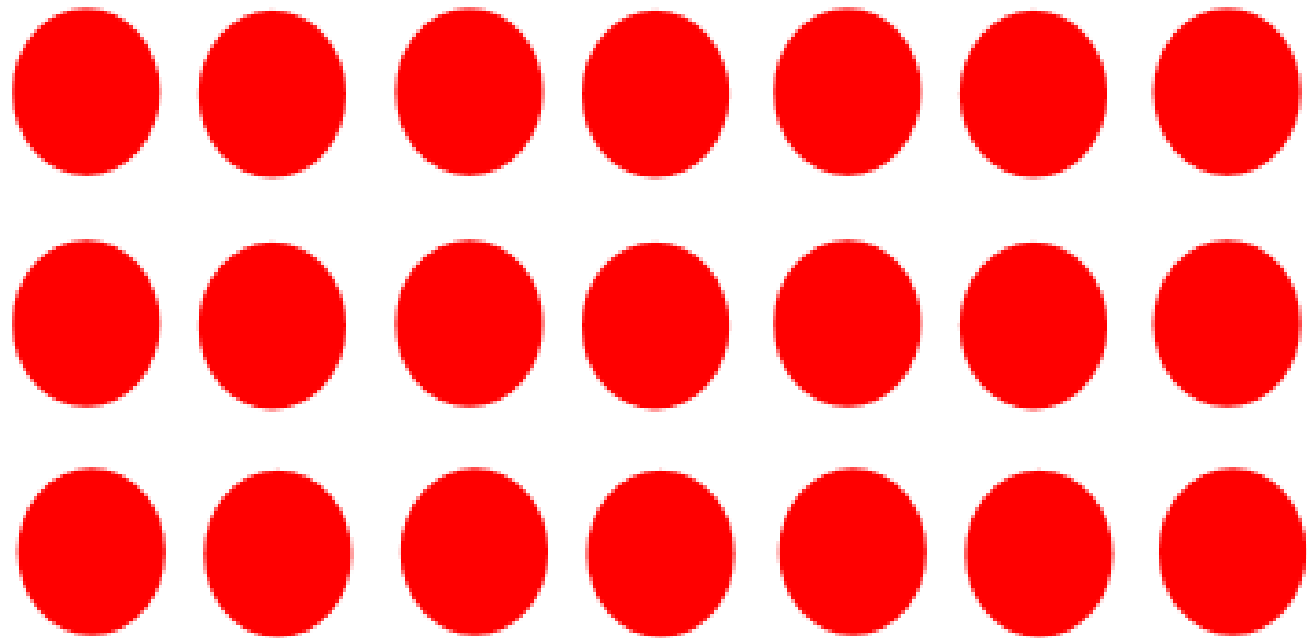


$$7 \times 3 = 21$$



Multiplication can be answered in any
order

Commutativity
 $3 \times 7 = 21$

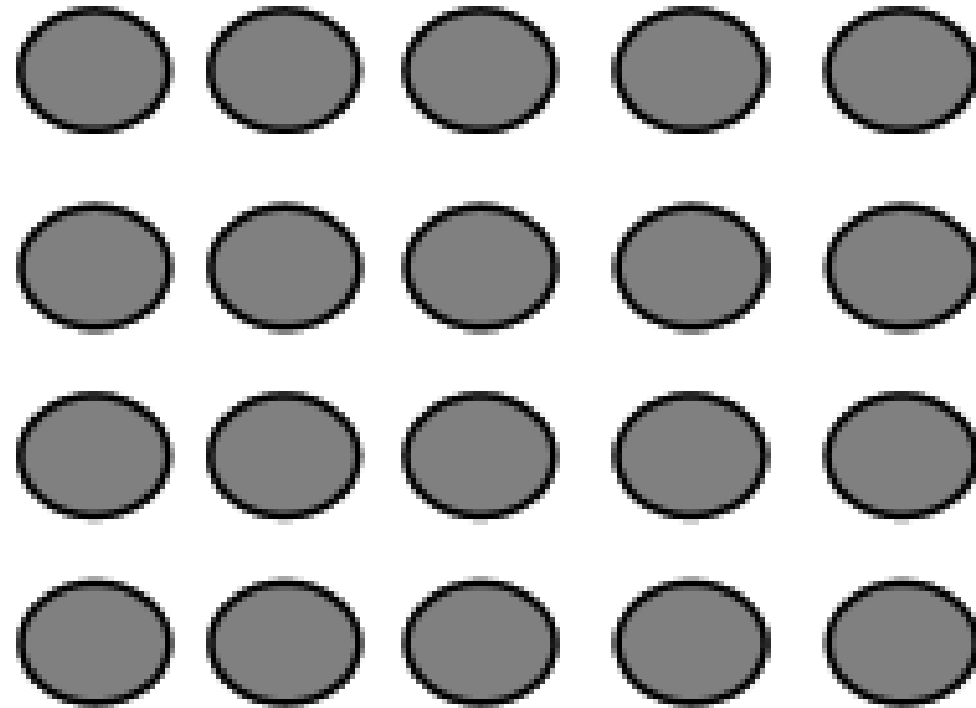
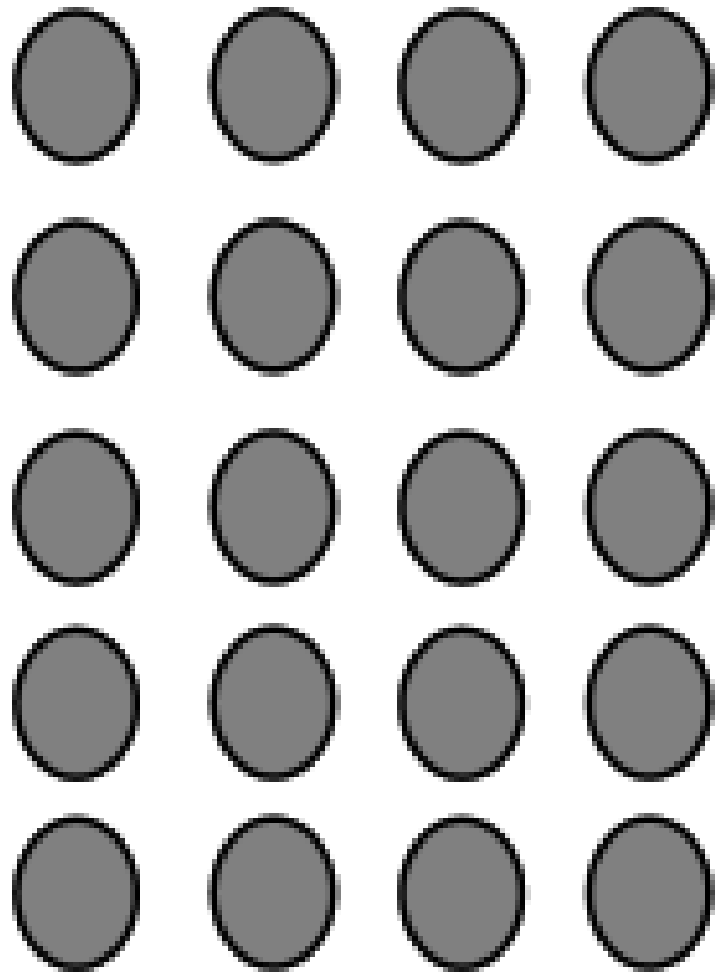


$$7 \times 3 = 21$$



Multiplication can be answered in any order

Commutativity
~~4~~ x 5 = 20

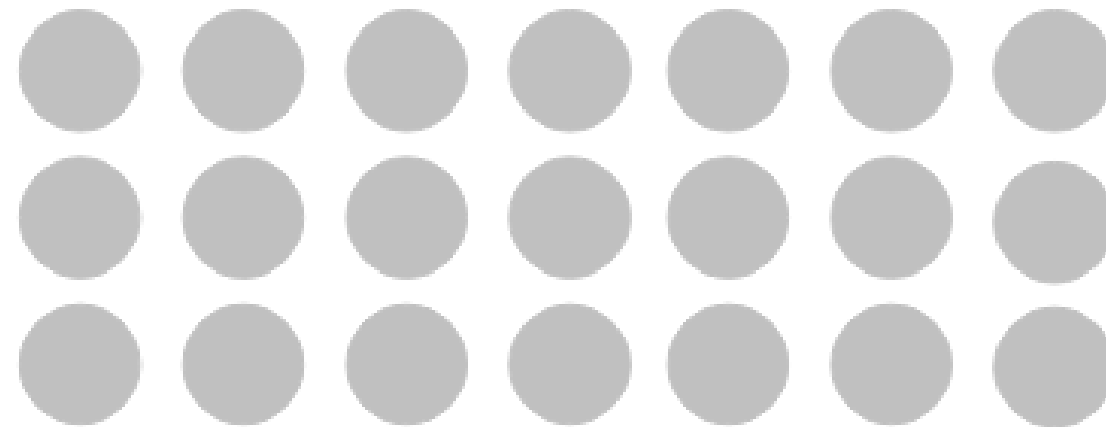
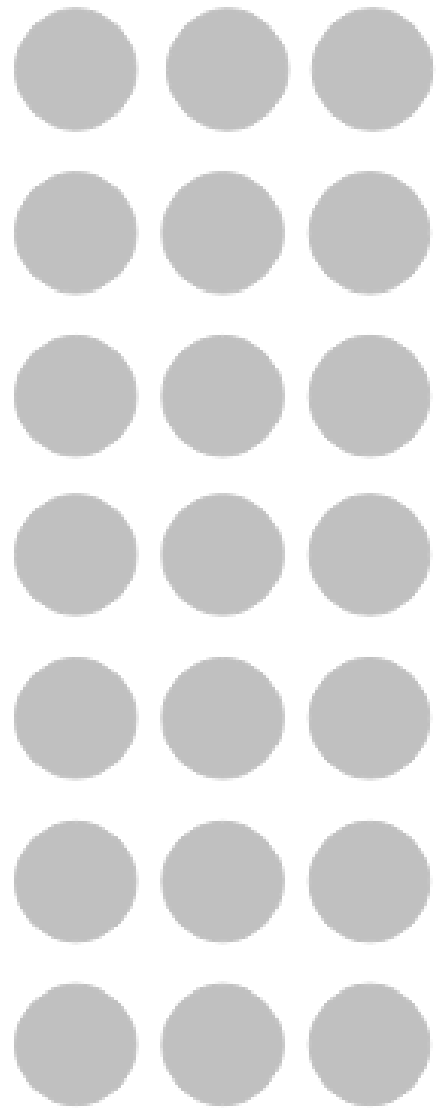


$$5 \times 4 = 20$$



Multiplication can be answered in any order

Commutativity
 $3 \times 7 = 21$



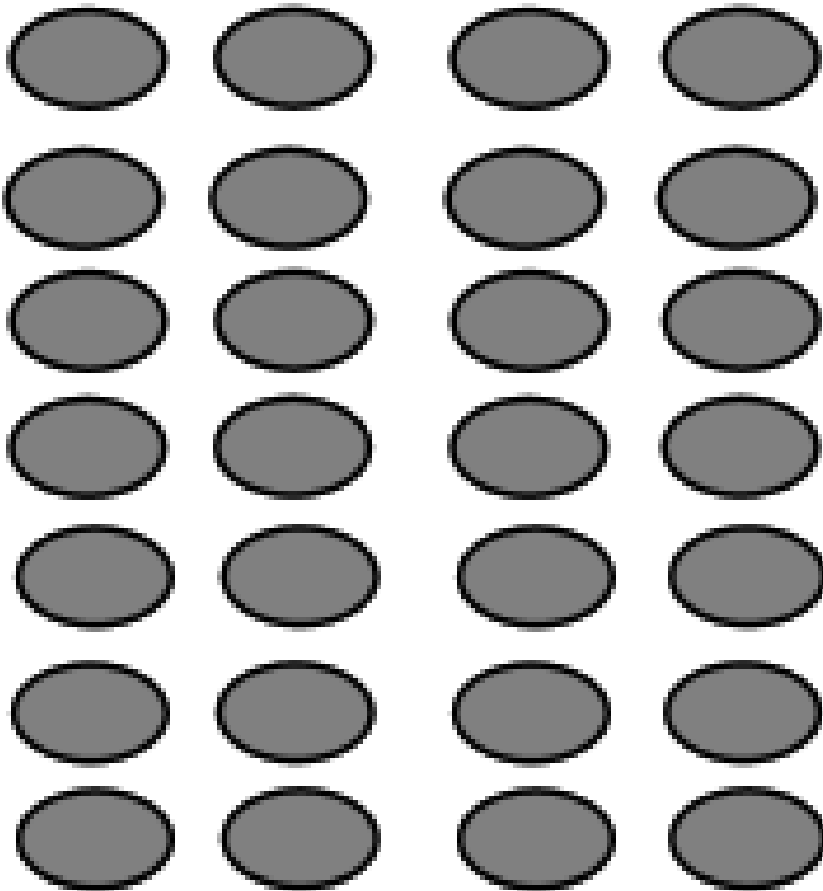
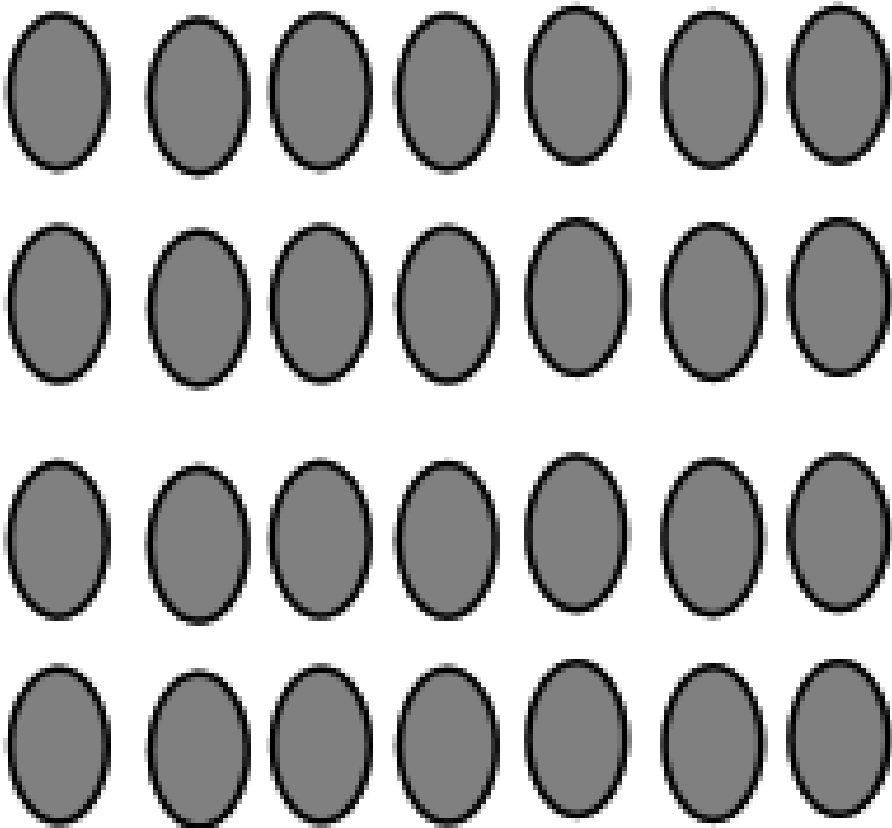
$$\mathbf{7 \times 3 = 21}$$



Your turn

Multiplication can be answered in any

rde
x  = 

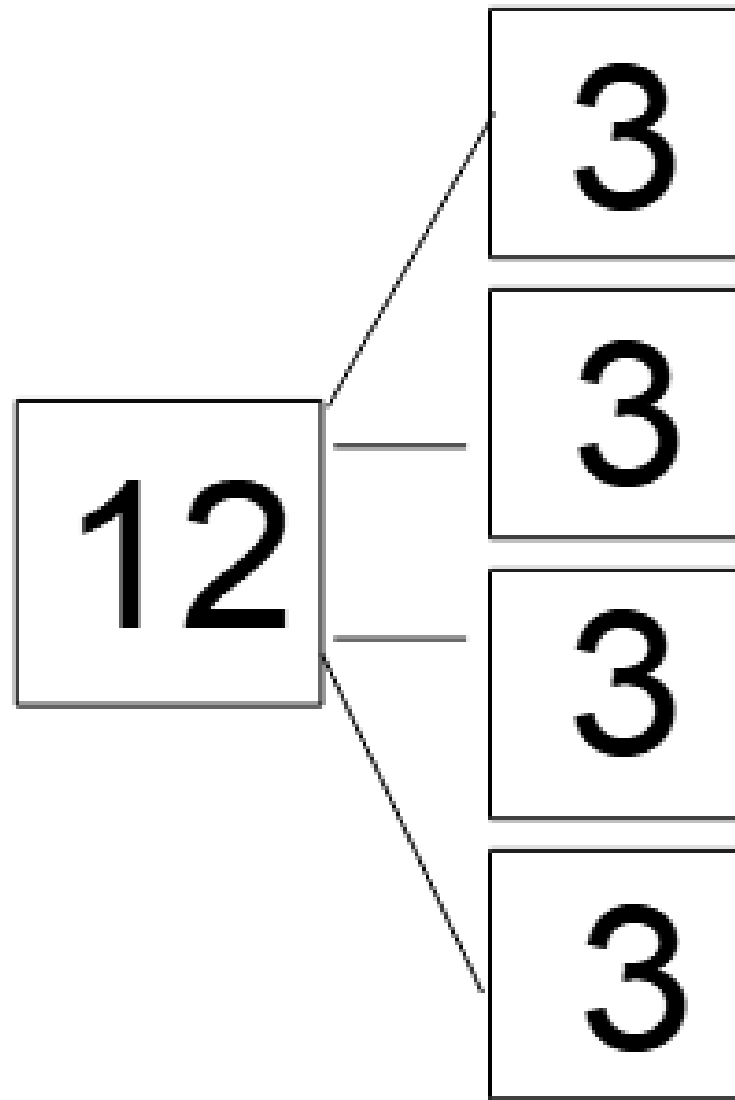


 **x**  = 

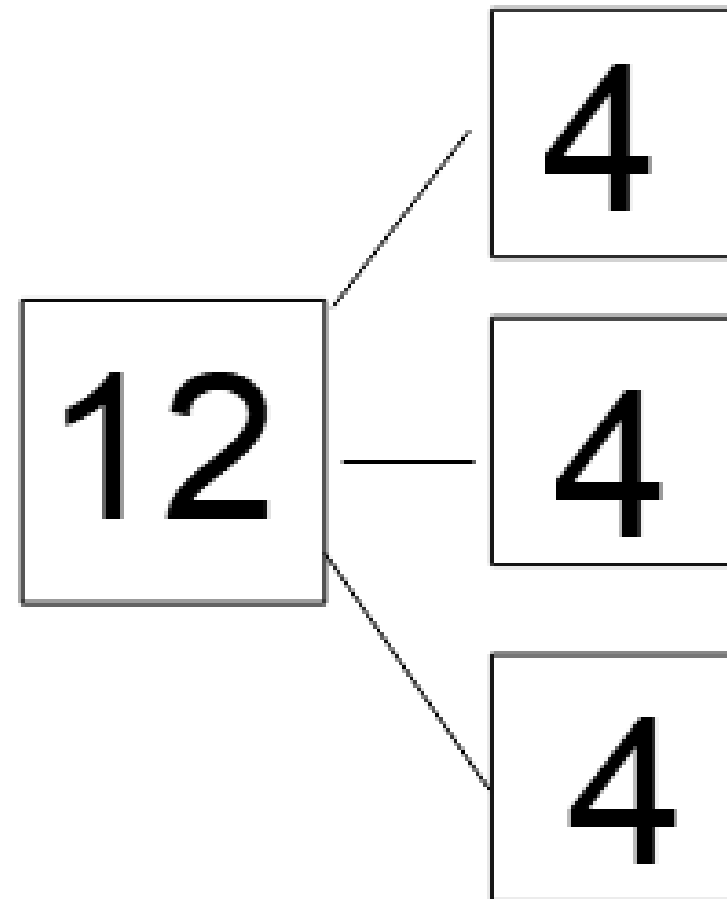


**Multiplication can be answered in any
order**

$$4 \times 3 = 12$$



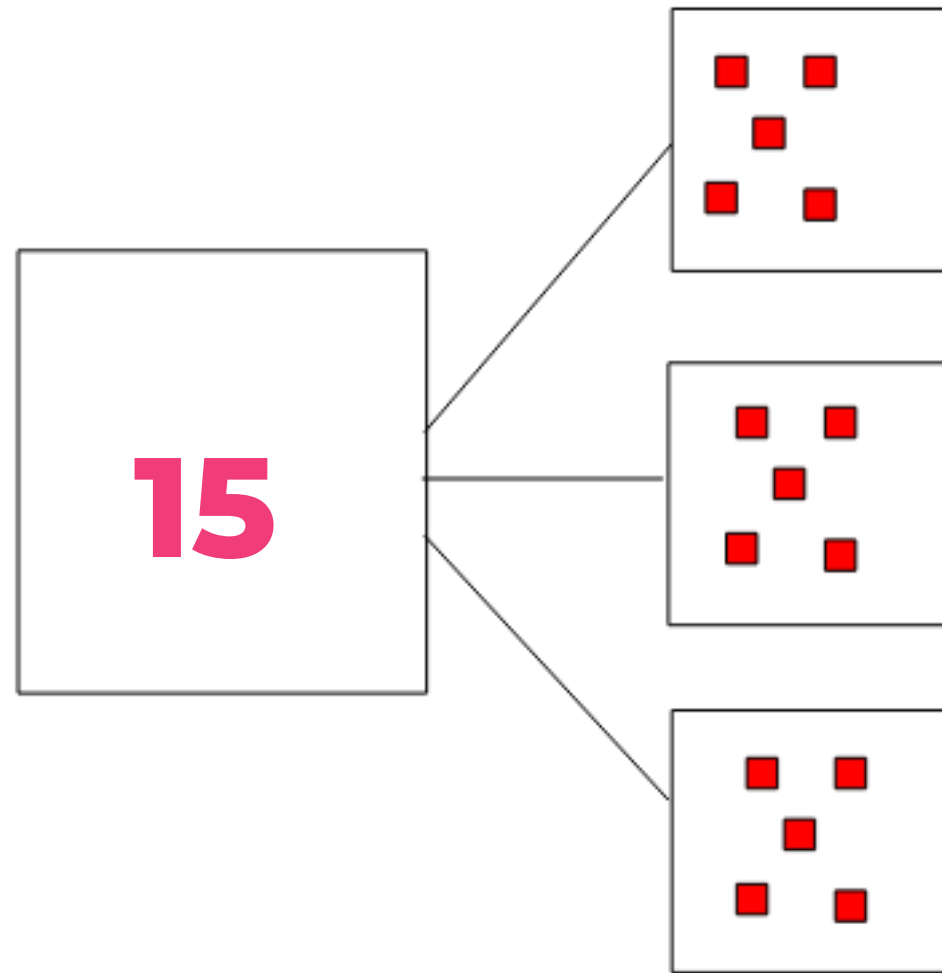
$$3 \times 4 = 12$$



**Multiplication can be answered in any
order**

$$3 \times 5 = 15$$

$$5 \times 3 = 15$$



**Multiplication can be answered in any
order**

$$3 \times 6 = 18$$

$$6 \times 3 = 18$$



Answer these in whichever order you prefer

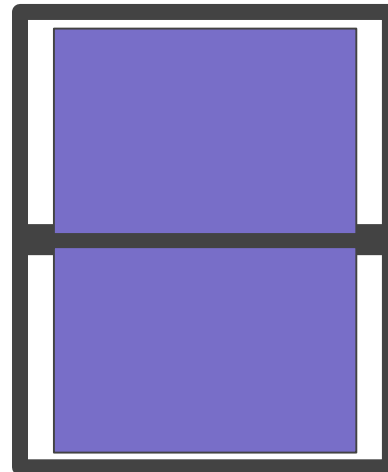
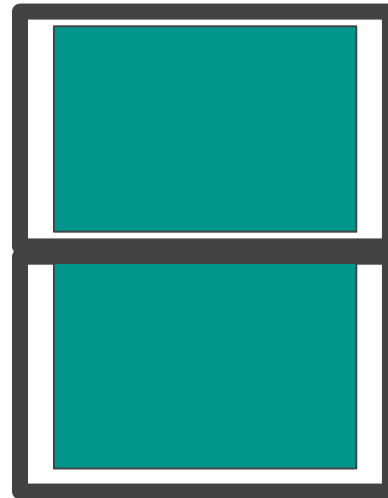
$$8 \times 3$$

$$3 \times 8$$

=

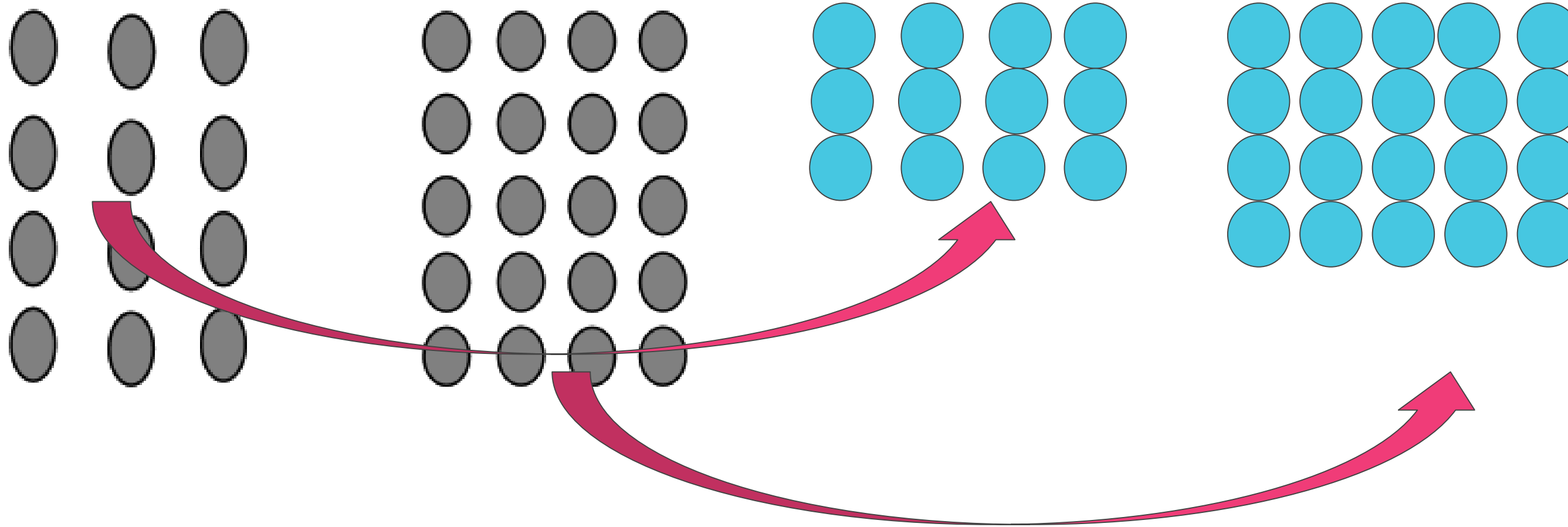
$$4 \times 11 =$$

$$11 \times 4 =$$



Part A

1) Match the corresponding arrays



1) If 5 people want 3 apples each,
how many apples are needed?

$$5 \times 3 = 15$$

$$3 \times 5 = 15$$



Part B

Match related calculations and decide which you would like to answer

$3 \times 7 = 21$	$8 \times 5 = 40$	$9 \times 3 = 27$
$8 \times 4 = 32$	$7 \times 3 = 21$	$7 \times 10 = 70$
$7 \times 5 = 35$	$3 \times 9 = 27$	$5 \times 7 = 35$
$10 \times 7 = 70$	$4 \times 8 = 32$	$5 \times 8 = 40$

Challenge - if you know $2 \times 4 = 8$

$$4 \times 2 = 8$$

$$40 \times 2 = 80$$

$$8 \div 4 = 2$$

