

# Year 2 Maths Multiplication and Division Learning Activity Book

Content Descriptors	Activity Sheet	Page Number	Notes
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point, then moving to other sequences (ACMNA026)	Weekly Time Challenge	2	
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)	Array for Maths!	3	
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)	Commutativity	4	
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031)  Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032)	Multiplication  Division  Circus Solve It!	5  6  7	
Answers			

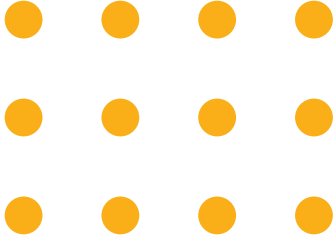
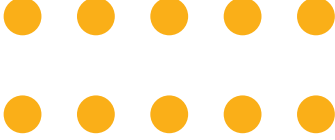
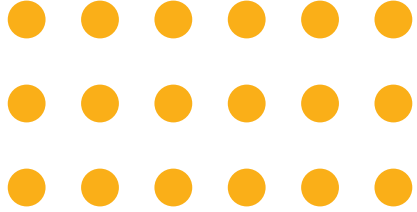
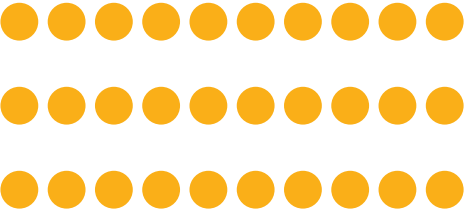
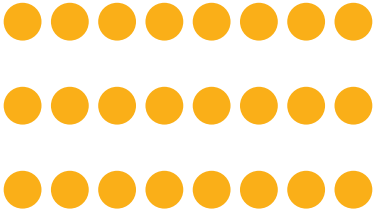
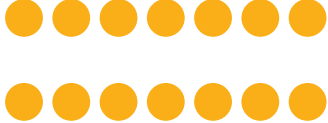
# Weekly Time Challenge

Ask your helper to time you for 60 seconds. Complete as many of the questions in the first column as you can, then mark them together. Next week, try and beat your score using the next column.

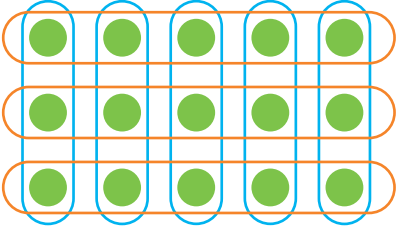


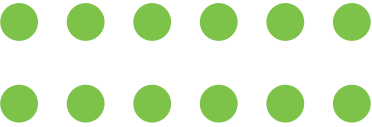
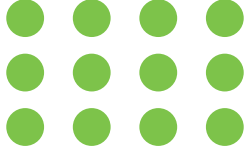
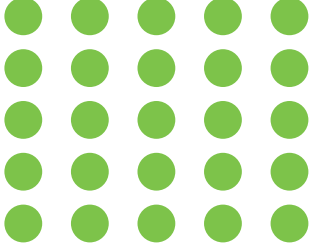
$3 \times 2 =$	$1 \times 5 =$	$1 \times 2 =$	$12 \times 2 =$	$1 \times 2 =$
$4 \times 5 =$	$5 \times 2 =$	$3 \times 3 =$	$11 \times 5 =$	$2 \times 3 =$
$2 \times 10 =$	$10 \times 5 =$	$5 \times 5 =$	$10 \times 2 =$	$3 \times 5 =$
$6 \times 5 =$	$4 \times 3 =$	$7 \times 10 =$	$1 \times 5 =$	$4 \times 3 =$
$3 \times 3 =$	$7 \times 10 =$	$9 \times 3 =$	$2 \times 3 =$	$5 \times 5 =$
$2 \times 5 =$	$2 \times 3 =$	$12 \times 5 =$	$3 \times 5 =$	$12 \times 3 =$
$1 \times 5 =$	$4 \times 2 =$	$11 \times 2 =$	$6 \times 3 =$	$11 \times 2 =$
$0 \times 3 =$	$6 \times 5 =$	$2 \times 10 =$	$4 \times 10 =$	$10 \times 3 =$
$10 \times 10 =$	$8 \times 10 =$	$4 \times 3 =$	$7 \times 2 =$	$9 \times 10 =$
$12 \times 2 =$	$9 \times 5 =$	$6 \times 5 =$	$9 \times 5 =$	$8 \times 10 =$
$11 \times 5 =$	$10 \times 3 =$	$8 \times 10 =$	$8 \times 3 =$	$7 \times 10 =$
$6 \times 3 =$	$11 \times 2 =$	$10 \times 2 =$	$2 \times 10 =$	$6 \times 3 =$
$5 \times 5 =$	$12 \times 5 =$	$12 \times 2 =$	$6 \times 10 =$	$0 \times 5 =$
$4 \times 2 =$	$3 \times 3 =$	$2 \times 3 =$	$2 \times 3 =$	$6 \times 2 =$
$6 \times 2 =$	$5 \times 10 =$	$7 \times 5 =$	$8 \times 5 =$	$8 \times 3 =$
$8 \times 10 =$	$10 \times 2 =$	$8 \times 10 =$	$9 \times 2 =$	$4 \times 2 =$
$4 \times 3 =$	$11 \times 5 =$	$9 \times 10 =$	$4 \times 5 =$	$11 \times 5 =$
$2 \times 2 =$	$9 \times 3 =$	$11 \times 3 =$	$3 \times 3 =$	$12 \times 3 =$
$5 \times 10 =$	$1 \times 10 =$	$12 \times 2 =$	$11 \times 2 =$	$0 \times 10 =$
$6 \times 4 =$	$0 \times 2 =$	$6 \times 5 =$	$12 \times 5 =$	$2 \times 2 =$

# Array for Maths!

Write two multiplication sentences for each of these arrays. The first one has been done for you.

		
$4 \times 3 = 12$		
$3 \times 4 = 12$		
		

Write two division sentences for each of these arrays. Try using coloured pencils to group the dots.

		
$15 \div 5 = 3$		
$15 \div 3 = 5$		
		

What do you notice about the last one?

# Commutativity

The commutative property of multiplication means that when two numbers are multiplied together it doesn't matter which one comes first because the product will be the same. Division does not have commutativity.

$4 \times 2 = 2 \times \underline{\quad\quad}$

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

$3 \times 5 = 5 \times \underline{\quad\quad}$

$3 \times 10 = 10 \times \underline{\quad\quad}$

$7 \times 10 = 10 \times \underline{\quad\quad}$

$11 \times 3 = 3 \times \underline{\quad\quad}$

Fill in the missing numbers:

$\underline{\quad\quad} \times 2 = 2 \times 5$

$5 \times 2 = \underline{\quad\quad}$

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

$\underline{\quad\quad} \times 3 = 3 \times 8$

$3 \times 8 = \underline{\quad\quad}$

$8 \times \underline{\quad\quad} = \underline{\quad\quad}$

$10 \times 2 = 2 \times \underline{\quad\quad}$

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

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

$4 \times 6 = \underline{\quad\quad} \times 4$

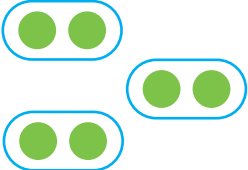

$\underline{\quad\quad} \times \underline{\quad\quad} = \underline{\quad\quad}$

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

Challenge: Ryan has 3 boxes with 5 cars in each. His friend Sam has 5 boxes with 3 cars in each. Who has the most cars?

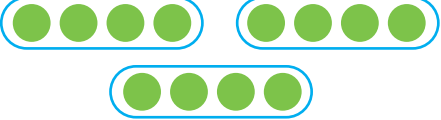


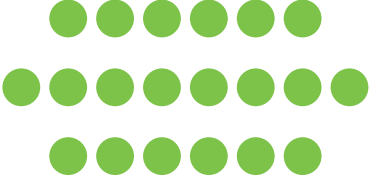

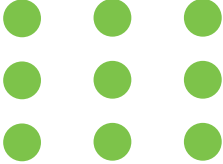
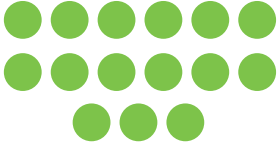
# Multiplication

Complete the table. The first one is done for you.

Factors	Repeated Addition	Groups	Array	Related Calculation (commutative property)	Product
$3 \times 2$	$2+2+2$			$2 \times 3$	6
$2 \times 5$					
$3 \times 10$					
$6 \times 2$					
$4 \times 3$					
$3 \times 5$					
$2 \times 10$					

# Division

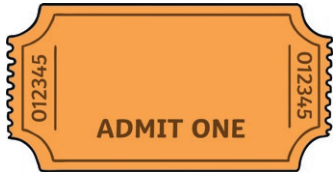
Complete the table. The first one is done for you.

Division	Sharing	Answer	Related Multiplication Facts
$12 \div 3$		4	$3 \times 4 = 12$ $4 \times 3 = 12$
$8 \div 2$			
$10 \div 5$			
$20 \div 10$			
$12 \div 2$			
$9 \div 3$			
$15 \div 5$			

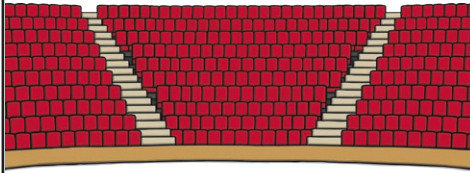
# Circus Solve it!

Emma and James are visiting the circus. Can you work out the answers to these problems for them? Use arrays, sharing, objects, or anything else that may help you. Don't forget to look for the important information!

Each children's ticket costs \$5. How much do the 2 children pay altogether?



Each section of the circus has 10 seats. If 40 people arrive, how many sections will they need?



There are 3 clowns and each clown juggles 4 balls. How many balls altogether?



There are 20 lollies in Emma's packet. If she shares them equally with James, how many lollies will they have each?



9 trapeze artists swing on 3 swings. How many trapeze artists are on each swing?



The motorbike riders are next. There are 18 wheels altogether. How many motorbikes are there?



The circus dancers wear feathers in their hair. There are 5 dancers and each dancer wears 3 feathers. How many feathers altogether?



There are 7 acrobats. Each acrobat does 5 tumbles. How many tumbles altogether?



At the end of the show, 10 performers take 30 bows altogether. How many bows does each performer take?



# Weekly Time Challenge Answers

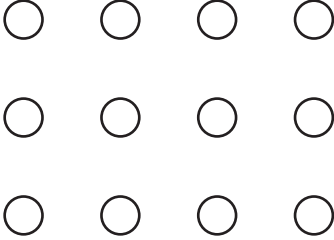
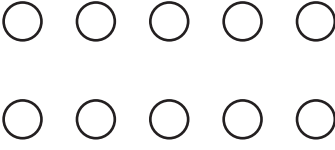
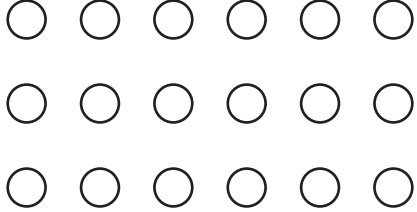
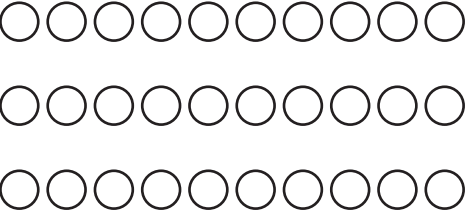
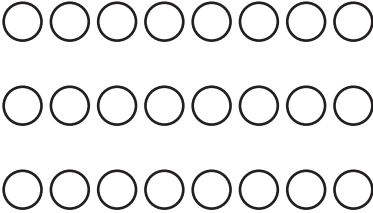
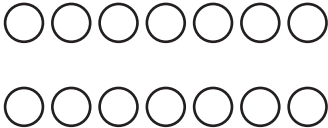
Ask your helper to time you for 60 seconds. Complete as many of the questions in the first column as you can, then mark them together. Next week, try and beat your score using the next column.

$3 \times 2 = 6$	$1 \times 5 = 5$	$1 \times 2 = 2$	$12 \times 2 = 24$	$1 \times 2 = 2$
$4 \times 5 = 20$	$5 \times 2 = 10$	$3 \times 3 = 9$	$11 \times 5 = 55$	$2 \times 3 = 6$
$2 \times 10 = 20$	$10 \times 5 = 50$	$5 \times 5 = 25$	$10 \times 2 = 20$	$3 \times 5 = 15$
$6 \times 5 = 30$	$4 \times 3 = 12$	$7 \times 10 = 70$	$1 \times 5 = 5$	$4 \times 3 = 12$
$3 \times 3 = 9$	$7 \times 10 = 70$	$9 \times 3 = 27$	$2 \times 3 = 6$	$5 \times 5 = 25$
$2 \times 5 = 10$	$2 \times 3 = 6$	$12 \times 5 = 60$	$3 \times 5 = 15$	$12 \times 3 = 36$
$1 \times 5 = 5$	$4 \times 2 = 8$	$11 \times 2 = 22$	$6 \times 3 = 18$	$11 \times 2 = 22$
$0 \times 3 = 0$	$6 \times 5 = 30$	$2 \times 10 = 20$	$4 \times 10 = 40$	$10 \times 3 = 30$
$10 \times 10 = 100$	$8 \times 10 = 80$	$4 \times 3 = 12$	$7 \times 2 = 14$	$9 \times 10 = 90$
$12 \times 2 = 24$	$9 \times 5 = 45$	$6 \times 5 = 30$	$9 \times 5 = 45$	$8 \times 10 = 80$
$11 \times 5 = 55$	$10 \times 3 = 30$	$8 \times 10 = 80$	$8 \times 3 = 24$	$7 \times 10 = 70$
$6 \times 3 = 18$	$11 \times 2 = 22$	$10 \times 2 = 20$	$2 \times 10 = 20$	$6 \times 3 = 18$
$5 \times 5 = 25$	$12 \times 5 = 60$	$12 \times 2 = 24$	$6 \times 10 = 60$	$0 \times 5 = 0$
$4 \times 2 = 8$	$3 \times 3 = 9$	$2 \times 3 = 6$	$2 \times 3 = 6$	$6 \times 2 = 12$
$6 \times 2 = 12$	$5 \times 10 = 50$	$7 \times 5 = 35$	$8 \times 5 = 40$	$8 \times 3 = 24$
$8 \times 10 = 80$	$10 \times 2 = 20$	$8 \times 10 = 80$	$9 \times 2 = 18$	$4 \times 2 = 8$
$4 \times 3 = 12$	$11 \times 5 = 55$	$9 \times 10 = 90$	$4 \times 5 = 20$	$11 \times 5 = 55$
$2 \times 2 = 4$	$9 \times 3 = 27$	$11 \times 3 = 33$	$3 \times 3 = 9$	$12 \times 3 = 36$
$5 \times 10 = 50$	$1 \times 10 = 10$	$12 \times 2 = 24$	$11 \times 2 = 22$	$0 \times 10 = 0$
$6 \times 4 = 24$	$0 \times 2 = 0$	$6 \times 5 = 30$	$12 \times 5 = 60$	$2 \times 2 = 4$

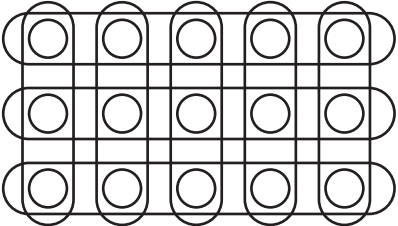
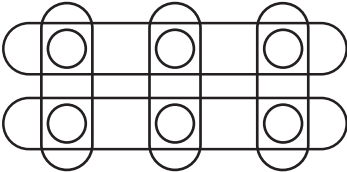
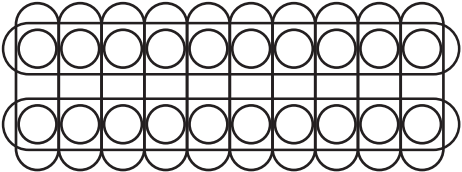
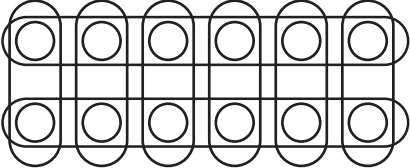
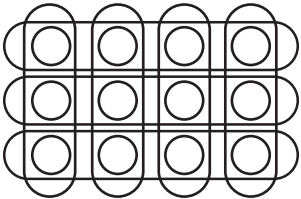
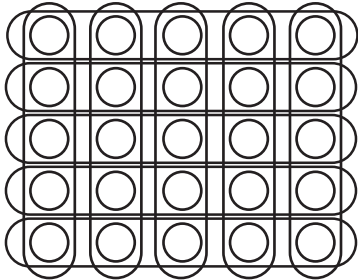


# Array for Maths! Answers

Write two multiplication sentences for each of these arrays. The first one has been done for you.

		
$4 \times 3 = 12$	$2 \times 5 = 10$	$3 \times 6 = 18$
$3 \times 4 = 12$	$5 \times 2 = 10$	$6 \times 3 = 18$
		
$3 \times 10 = 30$	$8 \times 3 = 24$	$7 \times 2 = 14$
$10 \times 3 = 30$	$3 \times 8 = 24$	$2 \times 7 = 14$

Write two division sentences for each of these arrays. Try using coloured pencils to group the dots. What do you notice about the last one?

		
$15 \div 5 = 3$	$6 \div 2 = 3$	$20 \div 2 = 10$
$15 \div 3 = 5$	$6 \div 3 = 2$	$20 \div 10 = 2$
		
$12 \div 6 = 2$	$12 \div 4 = 3$	$25 \div 5 = 5$
$12 \div 2 = 6$	$12 \div 3 = 4$	

# Commutativity Answers

The commutative property of multiplication means that when two numbers are multiplied together it doesn't matter which one comes first because the product will be the same. Division does not have commutativity.

$$4 \times 2 = 2 \times 4$$

$$1 \times 3 = 3 \times 1$$

$$3 \times 5 = 5 \times 3$$

$$3 \times 10 = 10 \times 3$$

$$7 \times 10 = 10 \times 7$$

$$11 \times 3 = 3 \times 11$$

$$5 \times 2 = 2 \times 5$$

$$8 \times 3 = 3 \times 8$$

$$5 \times 2 = 10$$

$$3 \times 8 = 24$$

$$2 \times 5 = 10$$

$$8 \times 3 = 24$$

$$10 \times 2 = 2 \times 10$$

$$4 \times 6 = 6 \times 4$$

$$2 \times 10 = 20$$

$$4 \times 6 = 24$$

$$10 \times 2 = 20$$

$$6 \times 4 = 24$$

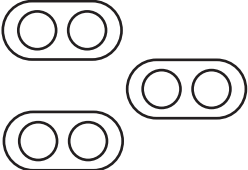
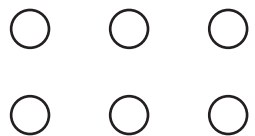
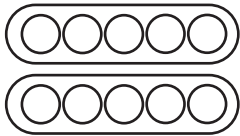
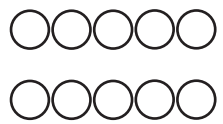
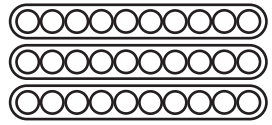

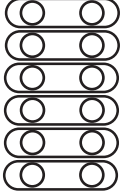
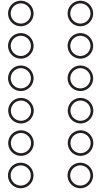
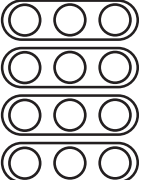
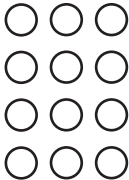
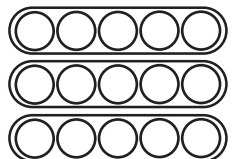
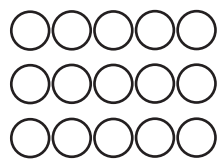
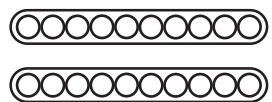

## Fill in the missing numbers:

Challenge: Ryan has 3 boxes with 5 cars in each. His friend Sam has 5 boxes with 3 cars in each. Who has the most cars?

$3 \times 5 = 15$      $5 \times 3 = 15$     They both have the same number of cars.

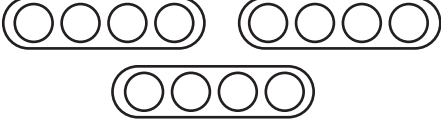

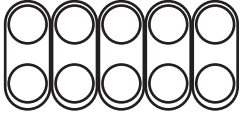
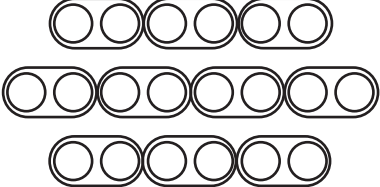
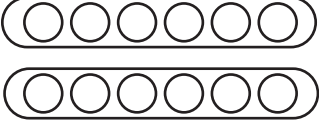
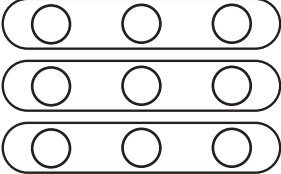
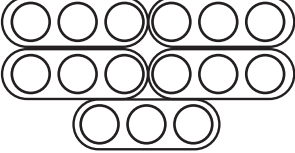
# Multiplication Answers

Complete the table. The first one is done for you.

Factors	Repeated Addition	Groups	Array	Related Calculation (commutative property)	Product
$3 \times 2$	$2 + 2 + 2$			$2 \times 3$	6
$2 \times 5$	$5 + 5$			$5 \times 2$	10
$3 \times 10$	$10 + 10 + 10$			$10 \times 3$	30
$6 \times 2$	$2 + 2 + 2 + 2 + 2 + 2$			$2 \times 6$	12
$4 \times 3$	$3 + 3 + 3 + 3$			$3 \times 4$	12
$3 \times 5$	$5 + 5 + 5$			$5 \times 3$	15
$2 \times 10$	$10 + 10$			$10 \times 2$	20


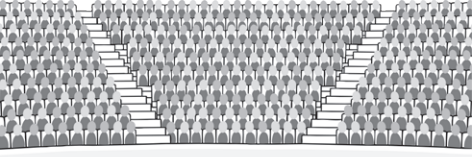



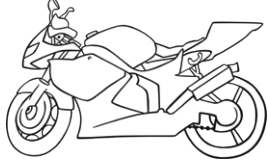


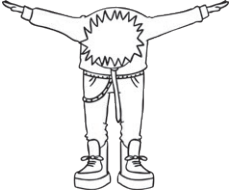
# Division Answers

Complete the table. The first one is done for you.

Division	Sharing	Answer	Related Multiplication Facts
$12 \div 3$		4	$3 \times 4 = 12$ $4 \times 3 = 12$
$8 \div 2$		4	$4 \times 2 = 8$ $2 \times 4 = 8$
$10 \div 5$		2	$5 \times 2 = 10$ $2 \times 5 = 10$
$20 \div 10$		2	$10 \times 2 = 20$ $2 \times 10 = 20$
$12 \div 2$		6	$6 \times 2 = 12$ $2 \times 6 = 12$
$9 \div 3$		3	$3 \times 3 = 9$
$15 \div 5$		3	$5 \times 3 = 15$ $3 \times 5 = 15$

# Circus Solve it! Answers

Emma and James are visiting the circus. Can you work out the answers to these problems for them? Use arrays, sharing, objects, or anything else that may help you. Don't forget to look for the important information!

<p>Each children's ticket costs \$5. How much do the 2 children pay altogether?</p>  <p><b>£10</b></p>	<p>Each section of the circus has 10 seats. If 40 people arrive, how many sections will they need?</p>  <p><b>4 sections</b></p>	<p>There are 3 clowns and each clown juggles 4 balls. How many balls altogether?</p>  <p><b>12 balls</b></p>
<p>There are 20 lollies in Emma's packet. If she shares them equally with James, how many lollies will they have each?</p>  <p><b>10 sweets</b></p>	<p>9 trapeze artists swing on 3 swings. How many trapeze artists are on each swing?</p>  <p><b>3 trapeze artists</b></p>	<p>The motorbike riders are next. There are 18 wheels altogether. How many motorbikes are there?</p>  <p><b>9 motorbikes</b></p>
<p>The circus dancers wear feathers in their hair. There are 5 dancers and each dancer wears 3 feathers. How many feathers altogether?</p>  <p><b>15 feathers</b></p>	<p>There are 7 acrobats. Each acrobat does 5 tumbles. How many tumbles altogether?</p>  <p><b>35 tumbles</b></p>	<p>At the end of the show, 10 performers take 30 bows altogether. How many bows does each performer take?</p>  <p><b>3 bows</b></p>