

Multiplication and Division

Master The Curriculum



3

Fluency Teaching Slides

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including reasoning, please visit:
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Reasoning - 1

Multiplication – Equal Groups

Which group of money is the odd one out?

Explain why.

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Reasoning - 2

Multiplication

Match the equal groups

Write another repeated problem and ask a question

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Reasoning - 1

Multiplication

There are 5 children. How many sweets?

Use concrete or pictorial to show the problem

Write another repeated problem and ask a question

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Reasoning - 2

Divide by 3

Zach has 21 seeds. He plants 3 seeds in each pot

21
7 7 7

Which bar model matches the problem? Explain your choice

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Reasoning - 1

Multiply by 4

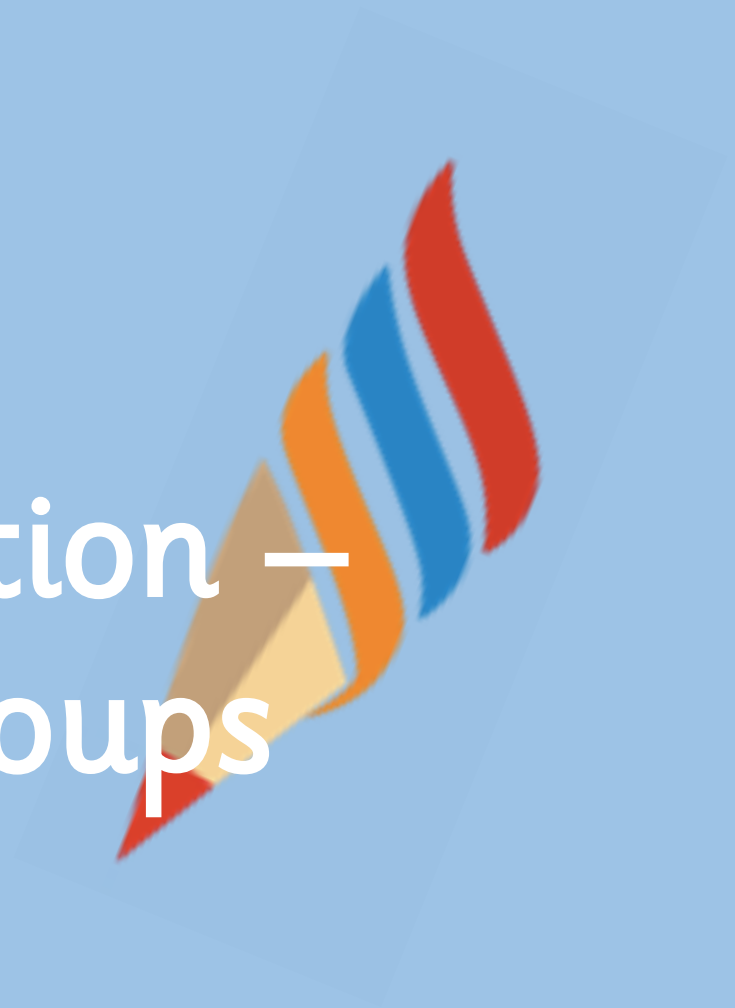
Malachi has three bags with four sweets in each bag. Esin has five bags with four sweets in each bag.

Who has more sweets? How many more sweets do they have? Draw a picture to show this problem.

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Multiplication – Equal Groups 3



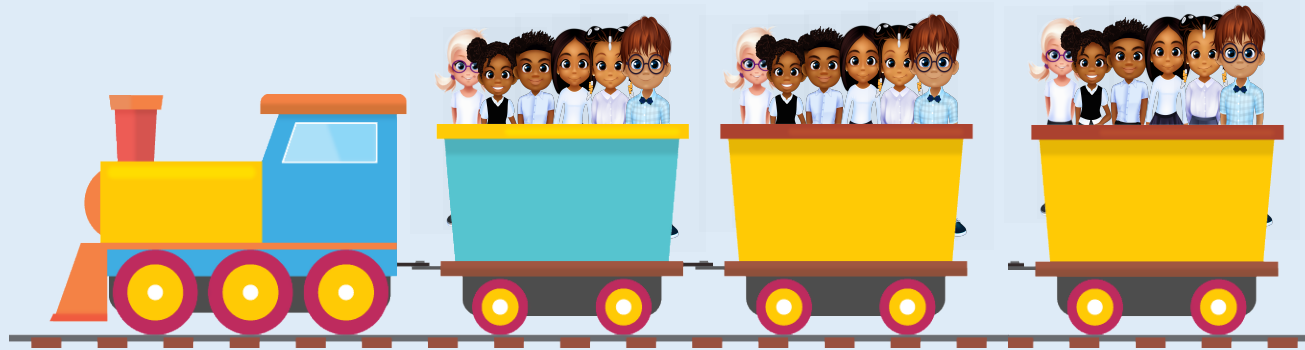
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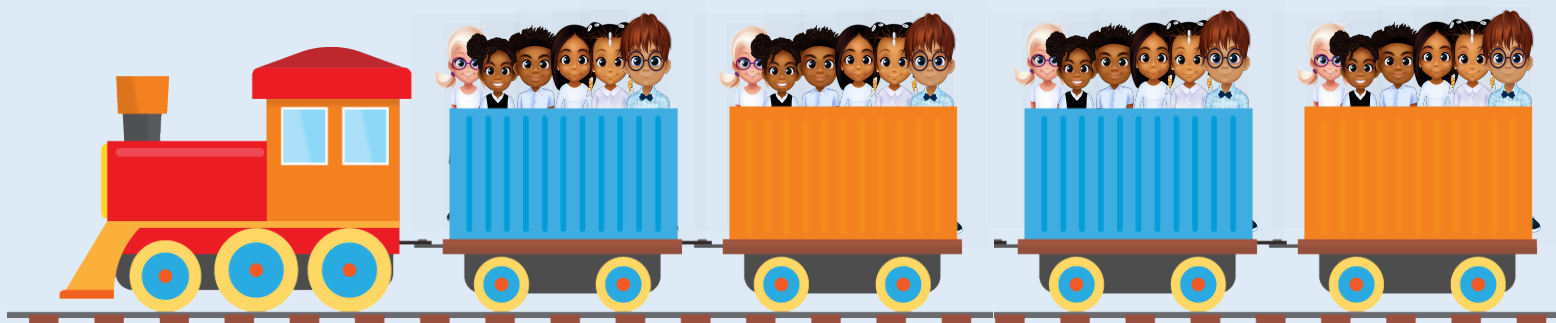
Activity 1

Multiplication – Equal Groups

Describe the equal groups.



_____ equal groups of _____



_____ equal groups of _____

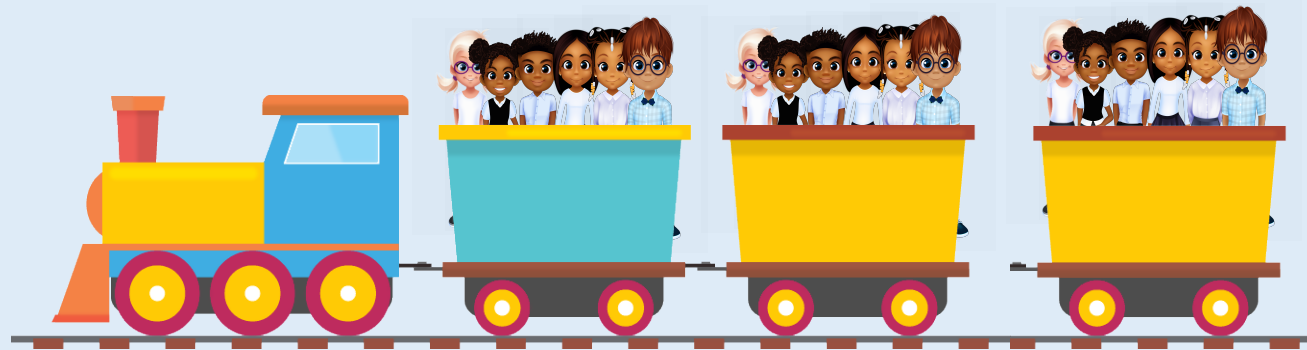


What is the same and what is different between each of the groups?

Activity 1

Multiplication – Equal Groups

Describe the equal groups.



3 equal groups of 6

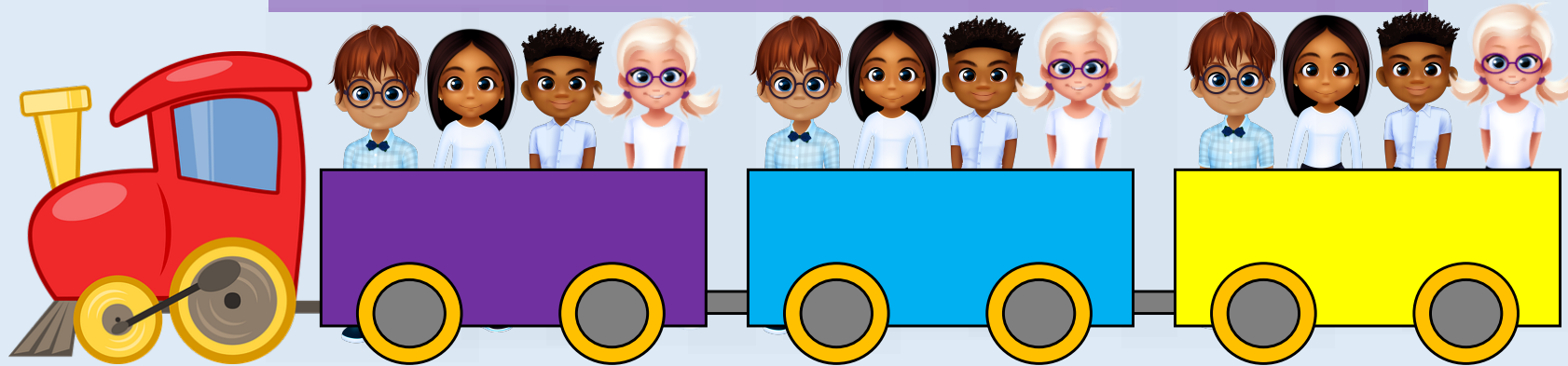


4 equal groups of 6

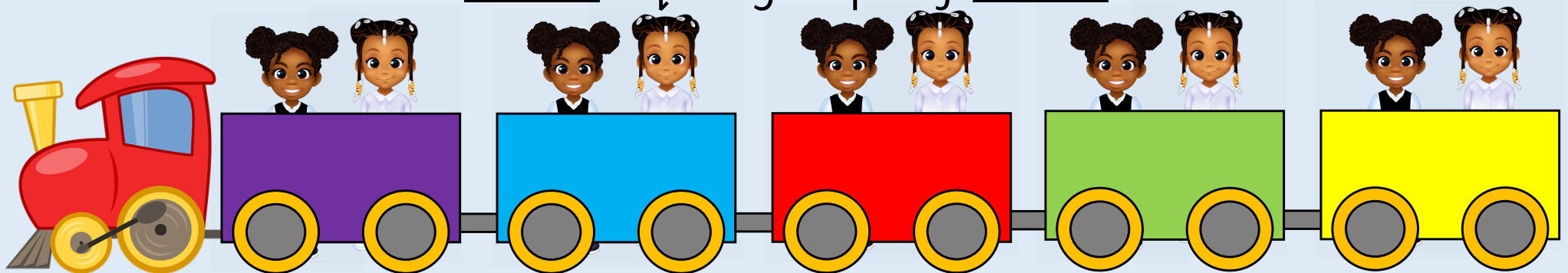
Activity 1

Multiplication – Equal Groups

Describe the equal groups.



_____ equal groups of _____

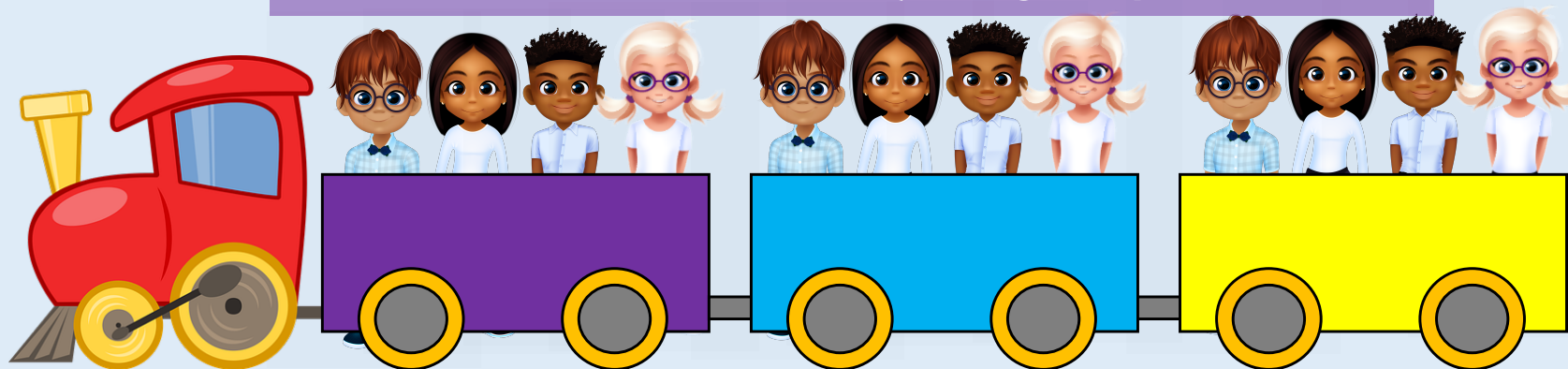


_____ equal groups of _____

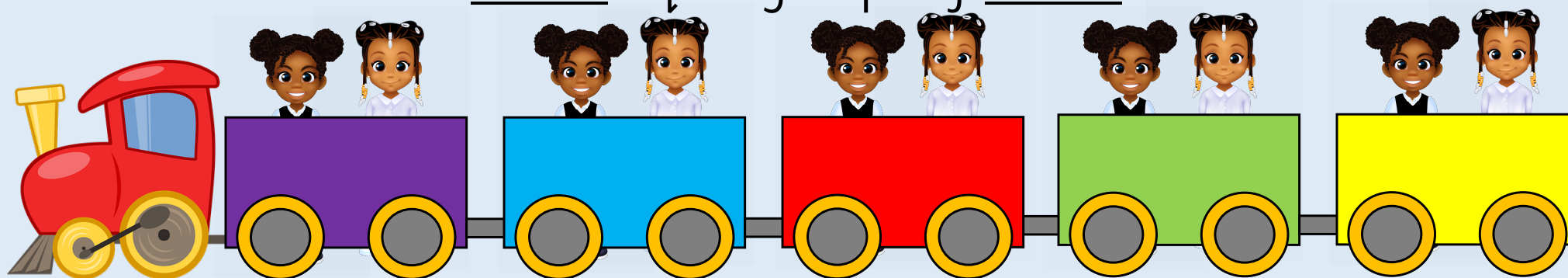
Activity 1

Multiplication – Equal Groups

Describe the equal groups.



3 equal groups of 4



5 equal groups of 2

Activity 2

Multiplication – Equal Groups

How many different ways can you represent 'six equal groups with 4 in each group'; 'six 4's'?



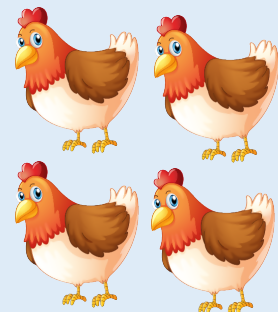
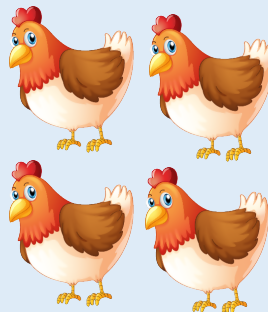
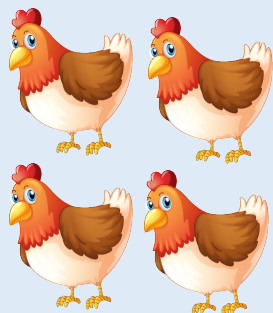
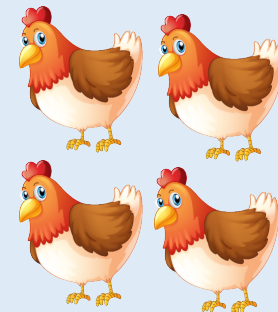
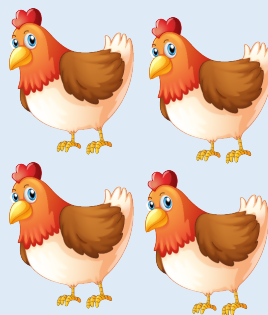
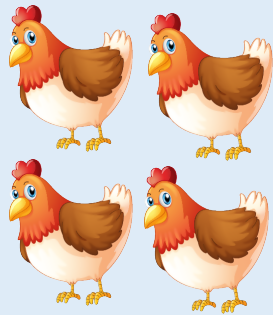
How can we represent the groups?

Activity 2

Multiplication – Equal Groups

How many different ways can you represent 'six equal groups with 4 in each group'; 'six 4's'?

There are a lot of ways to represent six equal groups with 4 in each group. One representation is, 6 groups of 4 in each group. One representation is, 6 groups of chickens.



Activity 2

Multiplication – Equal Groups

How many different ways can you represent 'five equal groups with 3 in each group'?



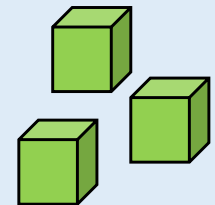
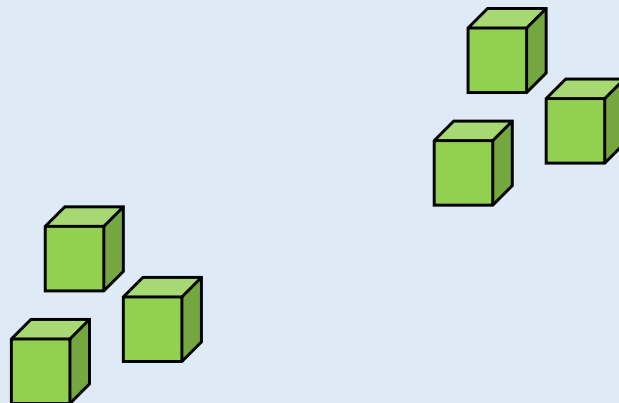
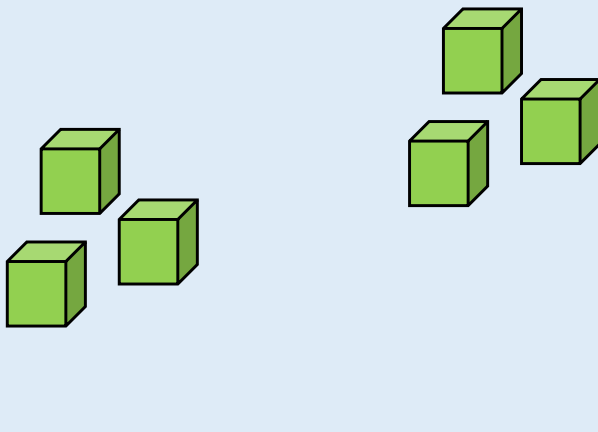
Activity 2

Multiplication – Equal Groups

How many different ways can you represent 'five equal groups with 3 in each group'?

There are a lot of ways to represent five equal groups with 3 in each group.

$$3 + 3 + 3 + 3 + 3 = 15$$



Activity 3

Multiplication – Equal Groups

Complete:

	Draw It
Say It There are ____ equal groups with ____ in each group. There are ____ altogether.	Add It



How can we represent the groups?

Activity 3

Multiplication – Equal Groups

Complete:

	Draw It
Say It There are <u>8</u> equal groups with <u>6</u> in each group. There are <u>48</u> altogether.	Add It $6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 = 48$

Activity 3

Multiplication – Equal Groups

Complete:

	Draw It
Say It There are ____ equal groups with ____ in each group. There are ____ altogether.	Add It



Activity 3

Multiplication – Equal Groups

Complete:

	Draw It
Say It There are <u>3</u> equal groups with <u>6</u> in each group. There are <u>18</u> altogether.	Add It $6 + 6 + 6 = 18$

What is the same and what is different between each of the groups?

What does 3 represent?

What does 8 represent?

How can we represent the groups?

Multiply by 3

3



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Do you remember how to count in 3s?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

How does this help us to multiply by 3?

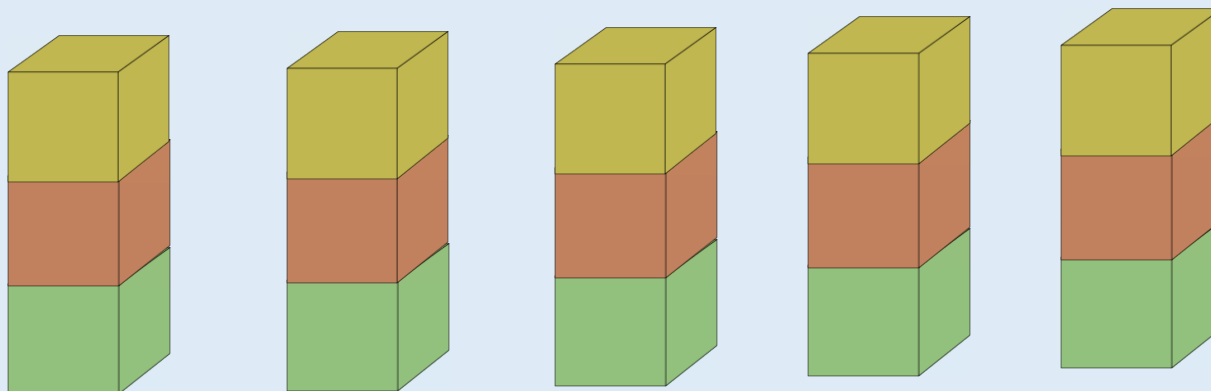
Activity 1

Multiply by 3

There are five towers with 3 cubes in each tower.
How many cubes are there altogether?

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

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



How many do we have altogether?

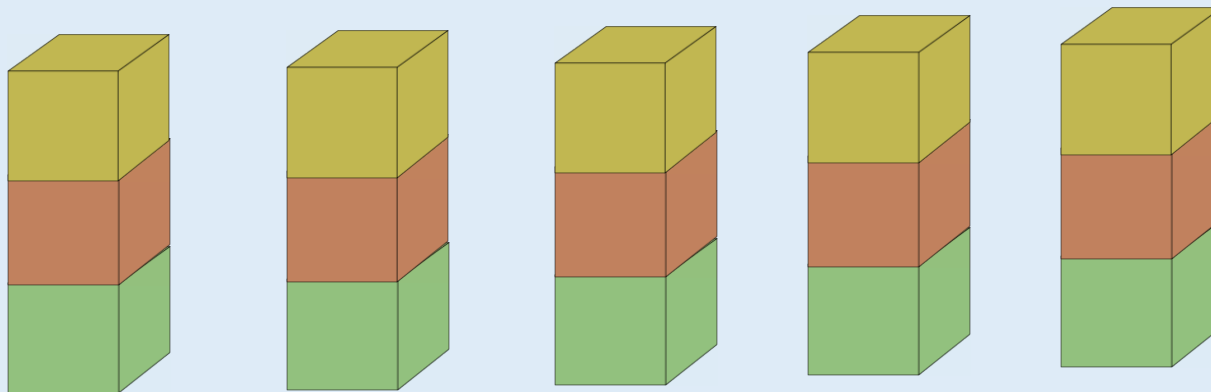
Activity 1

Multiply by 3

There are five towers with 3 cubes in each tower.
How many cubes are there altogether?

$$\underline{3} + \underline{3} + \underline{3} + \underline{3} + \underline{3} = \underline{15}$$

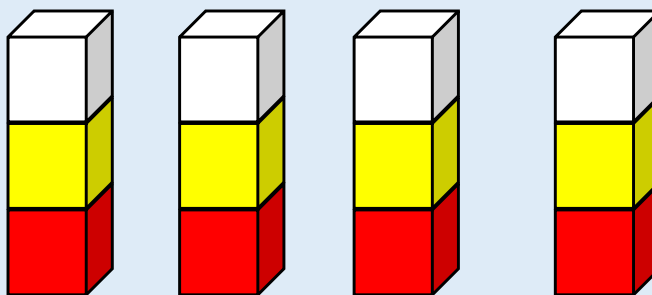
$$\underline{3} \times \underline{5} = \underline{15}$$



Activity 1

Multiply by 3

There are four towers with 3 cubes in each tower.
How many cubes are there altogether?



$$\underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

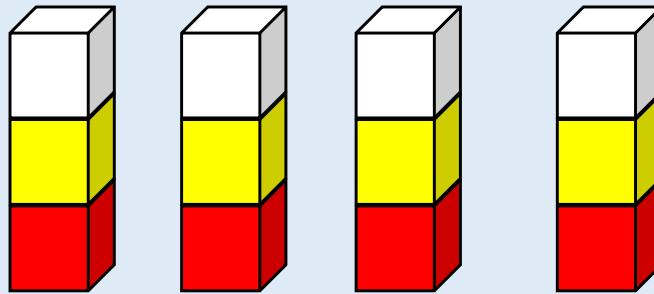
$$\underline{\quad\quad} \times \underline{\quad\quad} = \underline{\quad\quad}$$



Activity 1

Multiply by 3

There are four towers with 3 cubes in each tower.
How many cubes are there altogether?



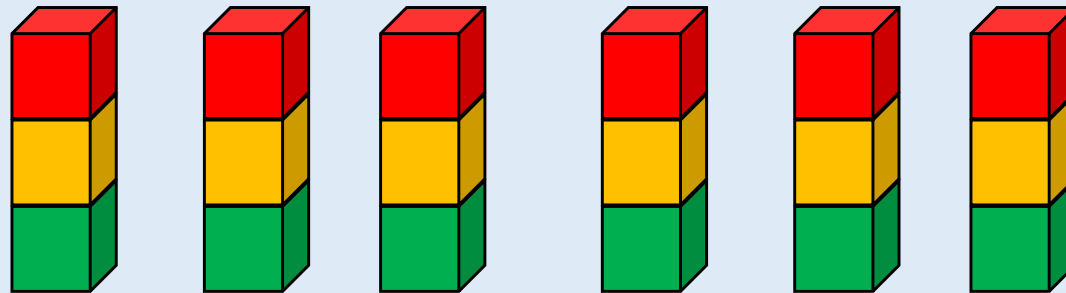
$$\underline{3} + \underline{3} + \underline{3} + \underline{3} = \underline{12}$$

$$\underline{3} \times \underline{4} = \underline{12}$$

Activity 1

Multiply by 3

There are six towers with 3 cubes in each tower. How many cubes are there altogether?



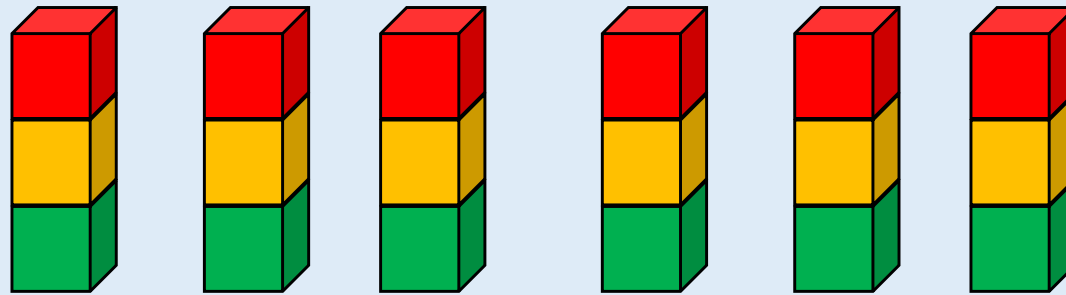
$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$

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

Activity 1

Multiply by 3

There are six towers with 3 cubes in each tower. How many cubes are there altogether?



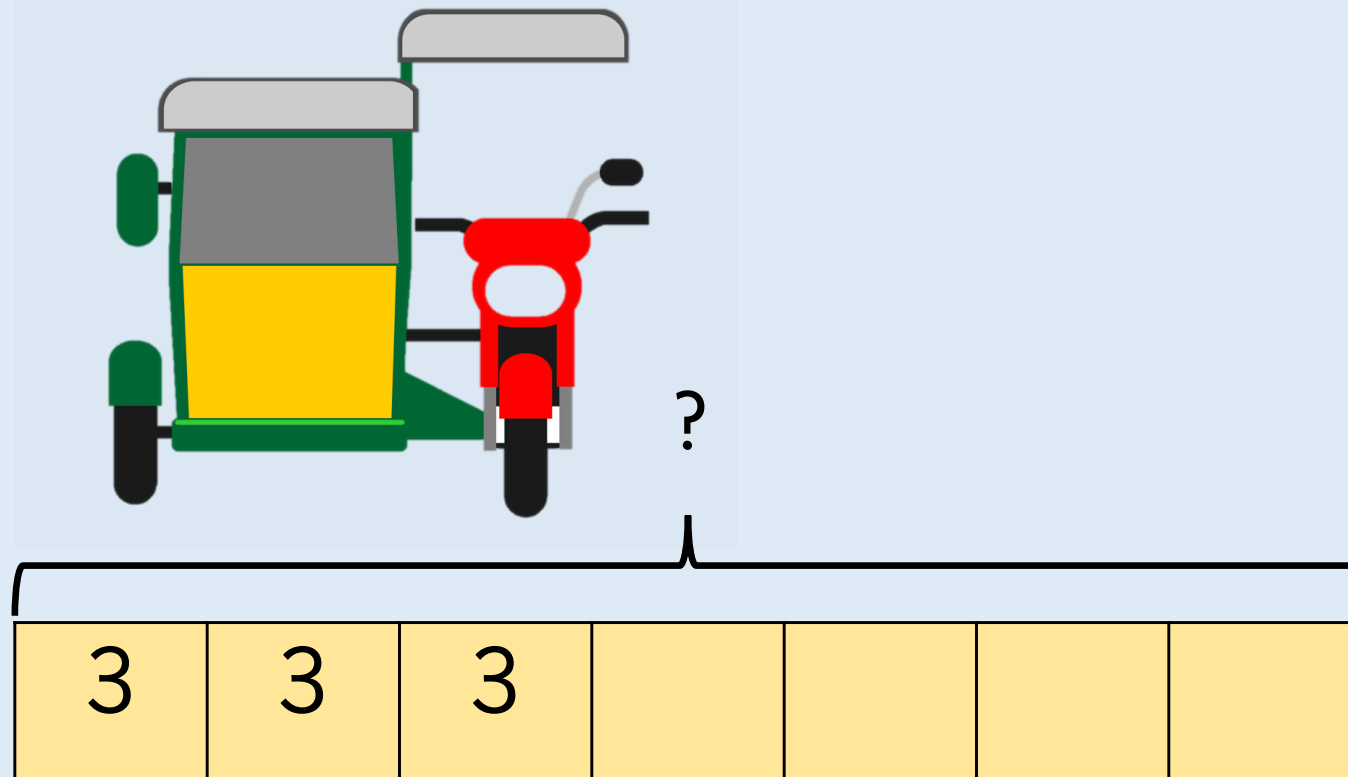
$$\underline{3} + \underline{3} + \underline{3} + \underline{3} + \underline{3} + \underline{3} = \underline{18}$$

$$\underline{3} \times \underline{6} = \underline{18}$$

Activity 2

Multiply by 3

There are 7 tricycles in a playground. How many wheels are there altogether? Complete the bar model to find the answer.

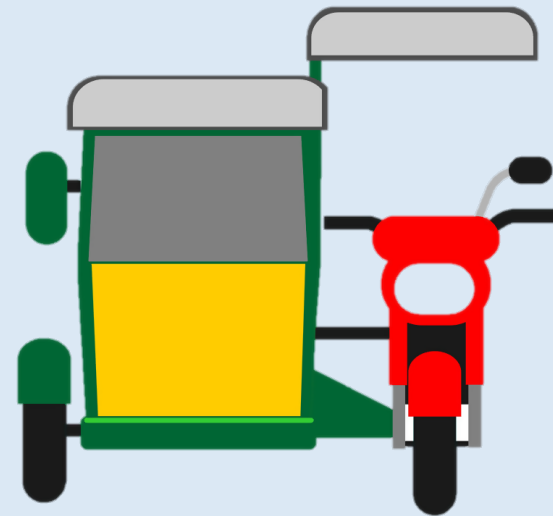


Can you represent the problem in a picture?

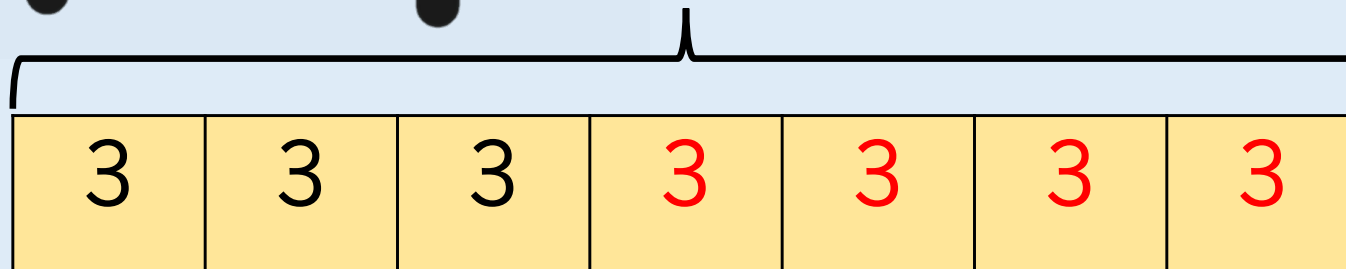
Activity 2

Multiply by 3

There are 7 tricycles in a playground. How many wheels are there altogether? Complete the bar model to find the answer.



21



Activity 2

Multiply by 3

There are 5 tricycles in a playground. How many wheels are there altogether? Complete the bar model to find the answer.



?



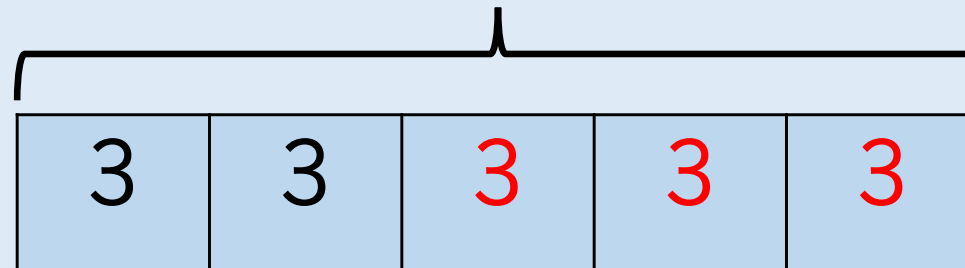
Activity 2

Multiply by 3

There are 5 tricycles in a playground. How many wheels are there altogether? Complete the bar model to find the answer.



15



Activity 3

Multiply by 3

There are 3 tables with 6 children on each table. How many children are there altogether?



_____ lots of _____ = _____

_____ x _____ = _____



How many lots of 3 do we have?

Activity 3

Multiply by 3

There are 3 tables with 6 children on each table. How many children are there altogether?



$$\underline{3} \text{ lots of } \underline{6} = \underline{18}$$

$$\underline{3} \times \underline{6} = \underline{18}$$

Activity 3

Multiply by 3

There are 3 tables with 4 children on each table. How many children are there altogether?

_____ lots of _____ = _____

_____ x _____ = _____



Activity 3

Multiply by 3

There are 3 tables with 4 children on each table. How many children are there altogether?

$$\underline{3} \text{ lots of } \underline{4} = \underline{12}$$

$$\underline{3} \times \underline{4} = \underline{12}$$



How many equal groups do we have?

How many are in each group?

How many do we have altogether?

Can you write a number sentence to show this?

Can you represent the problem in a picture?

Can you use concrete apparatus to solve the problem?

How many lots of 3 do we have?

How many groups of 3 do we have?

Divide by 3

3



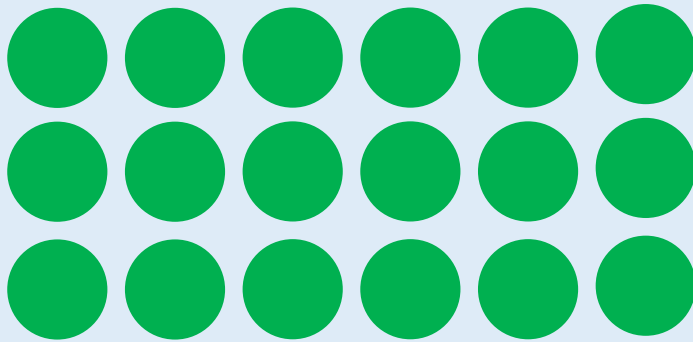
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Activity 1

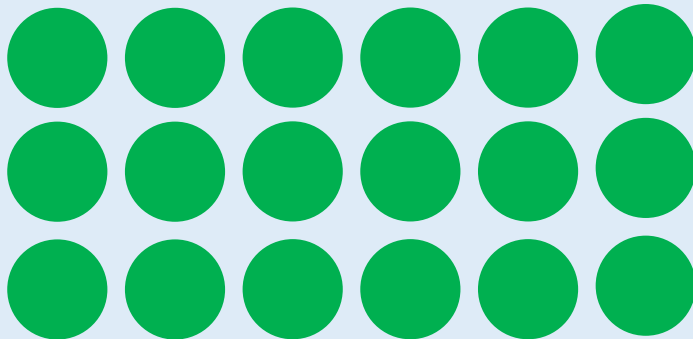
Divide by 3

Circle the counters in groups of 3 and complete the division.



$$\underline{\hspace{2cm}} \div 3 = \underline{\hspace{2cm}}$$

Circle the counters in 3 equal groups and complete the division.



$$\underline{\hspace{2cm}} \div 3 = \underline{\hspace{2cm}}$$



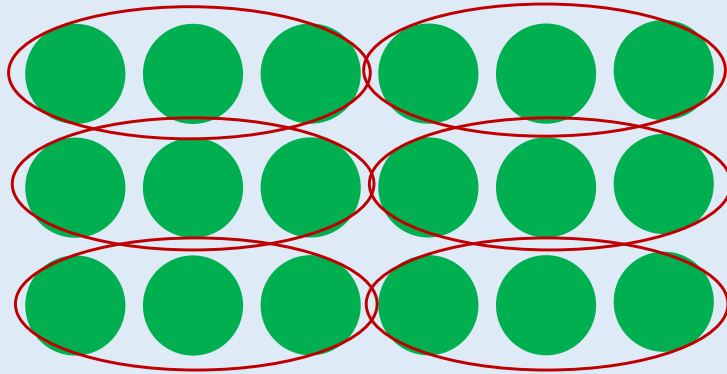
Can you group the numbers in threes?



Activity 1

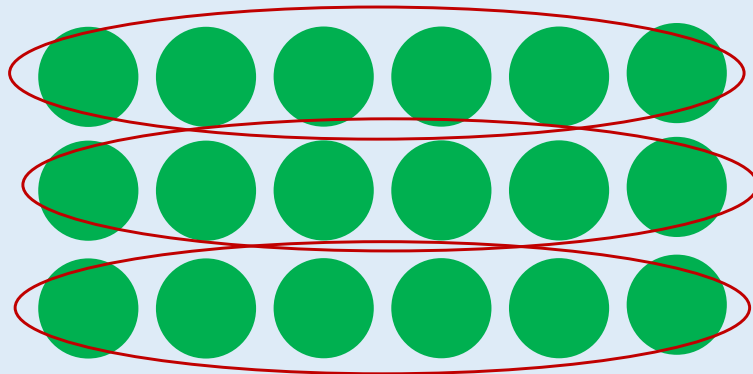
Divide by 3

Circle the counters in groups of 3 and complete the division.



$$\underline{18} \div 3 = \underline{6}$$

Circle the counters in 3 equal groups and complete the division.

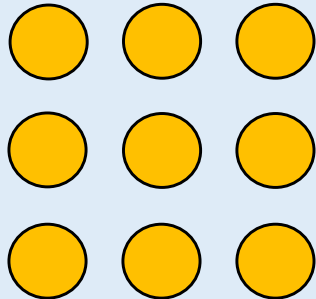


$$\underline{18} \div 3 = \underline{6}$$

Activity 1

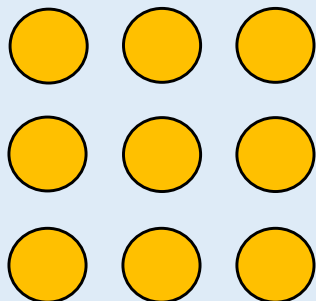
Divide by 3

Circle the counters in groups of 3 and complete the division.



$$\underline{\hspace{2cm}} \div 3 = \underline{\hspace{2cm}}$$

Circle the counters in 3 equal groups and complete the division.



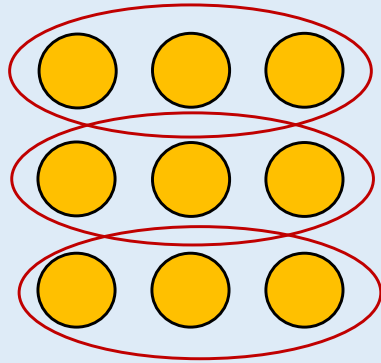
$$\underline{\hspace{2cm}} \div 3 = \underline{\hspace{2cm}}$$



Activity 1

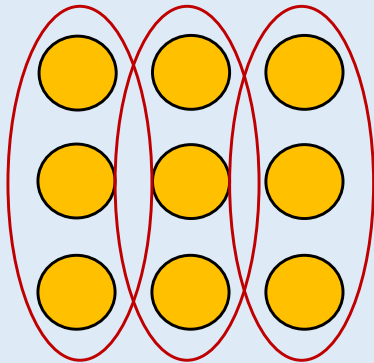
Divide by 3

Circle the counters in groups of 3 and complete the division.



$$\underline{9} \div 3 = \underline{3}$$

Circle the counters in 3 equal groups and complete the division.

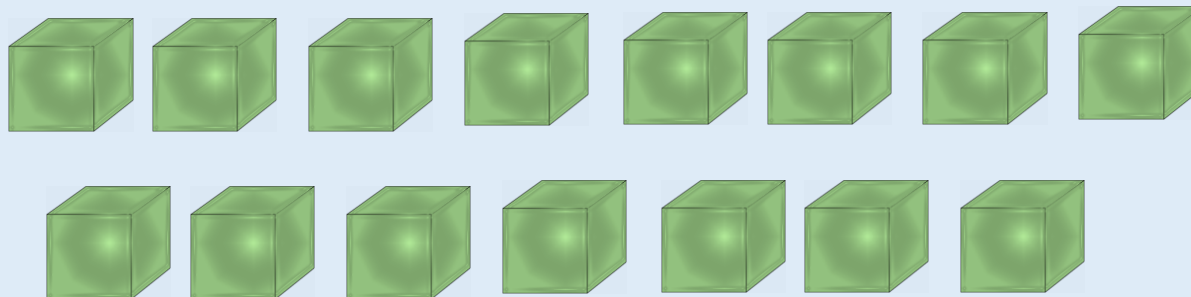
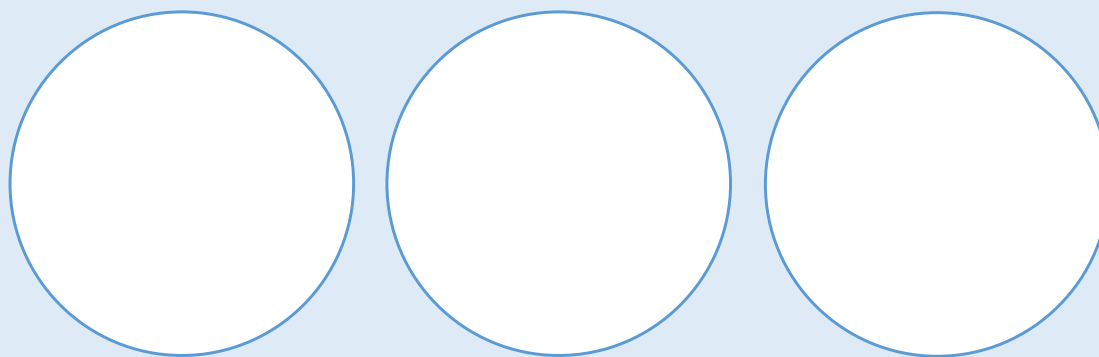


$$\underline{9} \div 3 = \underline{3}$$

Activity 2

Divide by 3

There are 15 pieces of fruit. They are shared between 3 bowls equally. How many pieces of fruit are in each bowl?
Use cubes/counters to represent fruit and share between 3 circles.

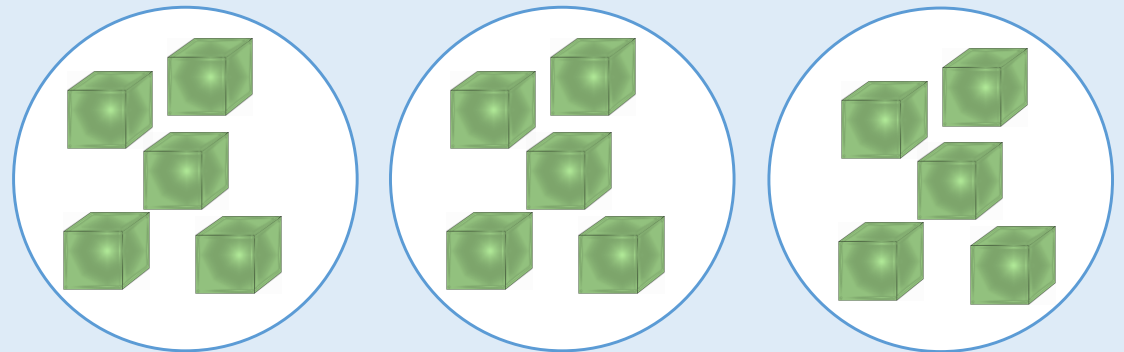


Can you share the number into three groups?

Activity 2

Divide by 3

There are 15 pieces of fruit. They are shared between 3 bowls equally. How many pieces of fruit are in each bowl?
Use cubes/counters to represent fruit and share between 3 circles.

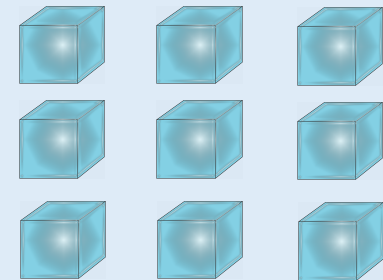
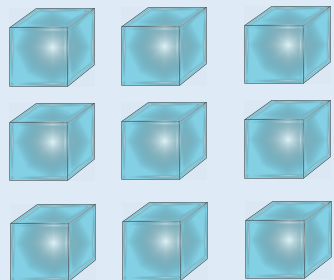
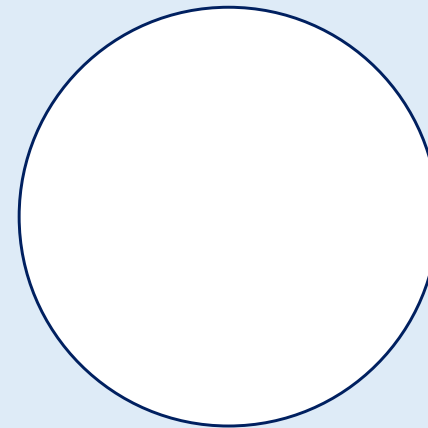
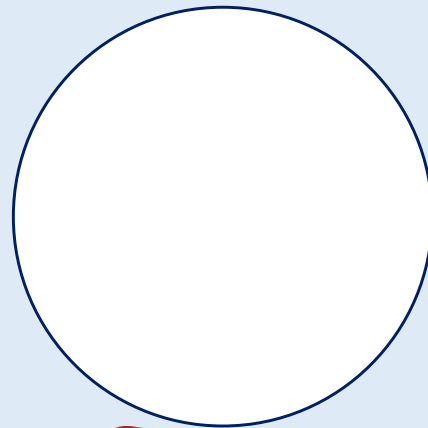
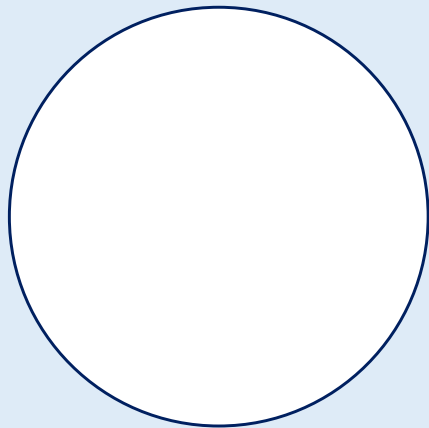


There are 5 pieces of fruit in each bowl.

Activity 2

Divide by 3

There are 18 pieces of fruit. They are shared between 3 bowls equally. How many pieces of fruit are in each bowl?
Use cubes/counters to represent fruit and share between 3 circles.

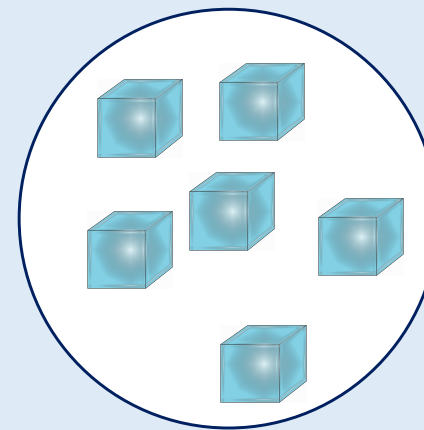
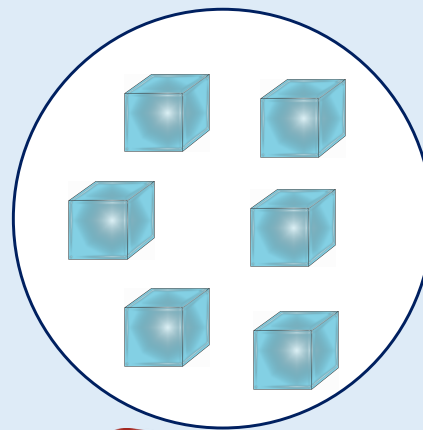
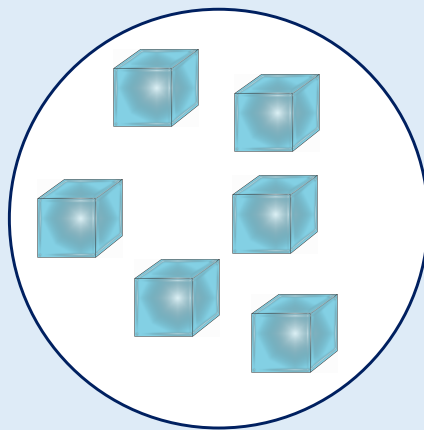


Activity 2

Divide by 3

There are 18 pieces of fruit. They are shared between 3 bowls equally. How many pieces of fruit are in each bowl?
Use cubes/counters to represent fruit and share between 3 circles.

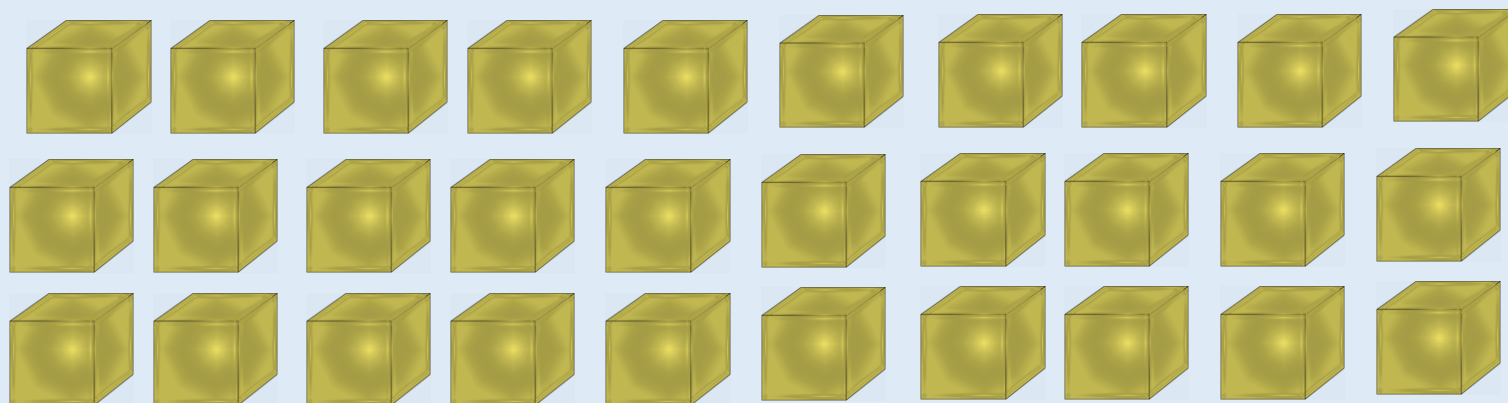
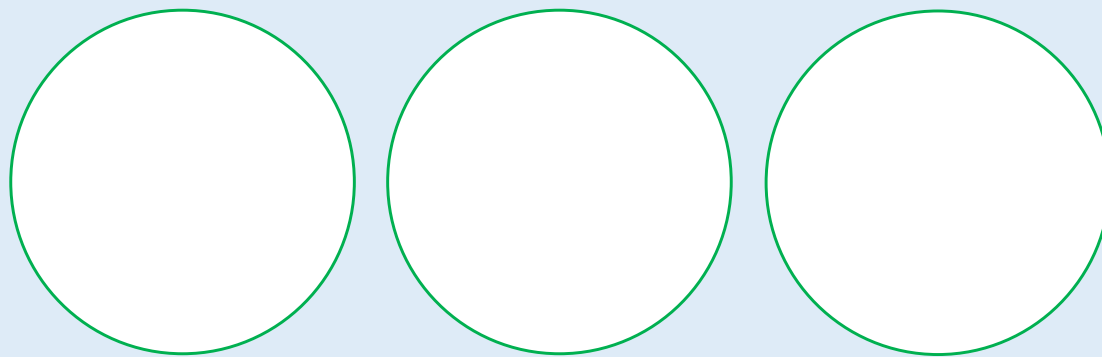
There are 6 pieces of fruit in each bowl.



Activity 2

Divide by 3

There are 30 marbles. They are shared between 3 jars equally. How many marbles are in each jar? Use cubes/counters to represent marble and share between 3 circles.

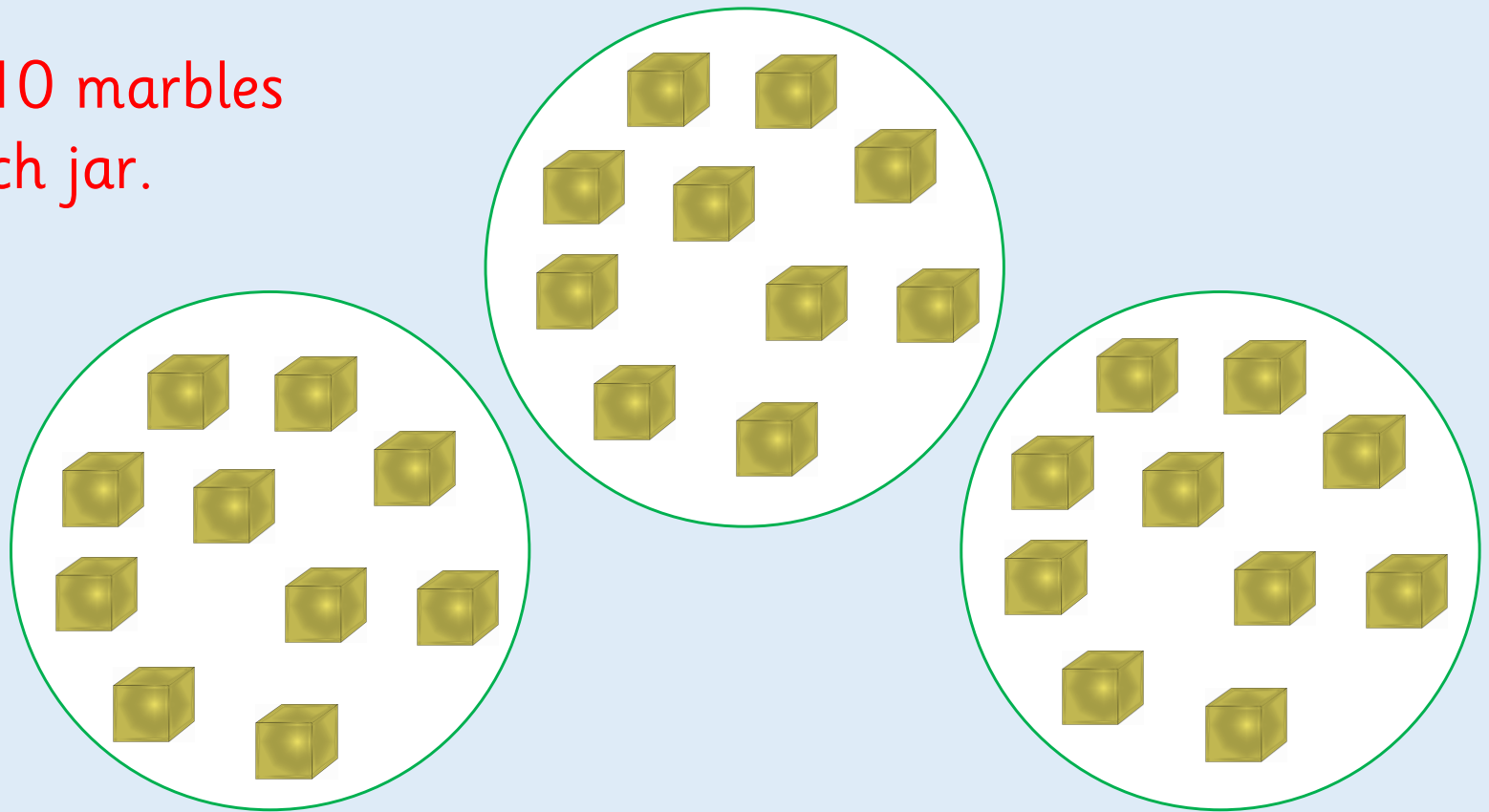


Activity 2

Divide by 3

There are 30 marbles. They are shared between 3 jars equally. How many marbles are in each jar? Use cubes/counters to represent marble and share between 3 circles.

There are 10 marbles
in each jar.



Activity 3

Divide by 3

Hair bands come in packs of 3.
If there are 21 bands altogether, how many packs are there?



Can you groups the numbers in threes?

Activity 3

Divide by 3

Hair bands come in packs of 3.
If there are 21 bands altogether, how many packs are there?



$$21 \div 3 = 7$$

There are 7 packs.

Activity 3

Divide by 3

Doughnuts come in packs of 3.
If there are 12 doughnuts altogether, how many packs are there?



Activity 3

Divide by 3

Doughnuts come in packs of 3.
If there are 12 doughnuts altogether, how many packs are there?



$$12 \div 3 = 4$$

There are 4 packs.

Can you group the numbers in threes?

Can you share the number into three groups?

What is different between sharing and grouping?

The 3 Times Table 3



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How many of your 3 times table do you know?

Which ones do you need to practise?

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

$$7 \times 3 = \underline{\quad}$$

$$12 \times 3 = \underline{\quad}$$

$$0 \times 3 = \underline{\quad}$$

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

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

Activity 1

The 3 Times Table

Complete the number sentences.

1 triangle has 3 sides.

3 triangles have ____ sides.

____ triangles have 6 sides.

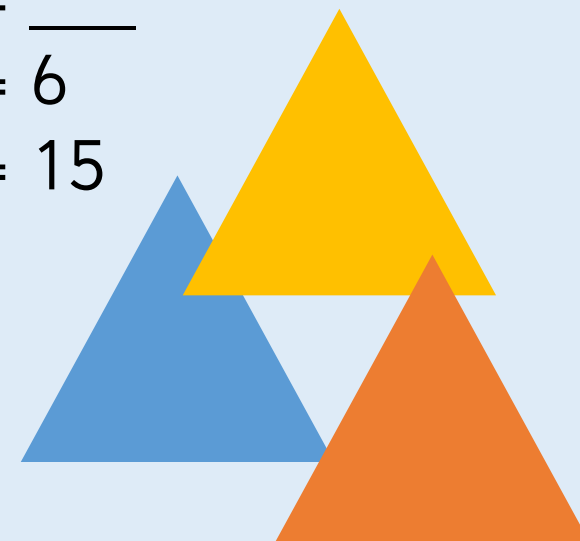
____ triangles have 15 sides.

$$1 \times 3 = 3$$

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

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

$$\underline{\quad} \times \underline{\quad} = 15$$



What other facts can you link to this one?

Activity 1

The 3 Times Table

Complete the number sentences.

1 triangle has 3 sides.

3 triangles have 9 sides.

2 triangles have 6 sides.

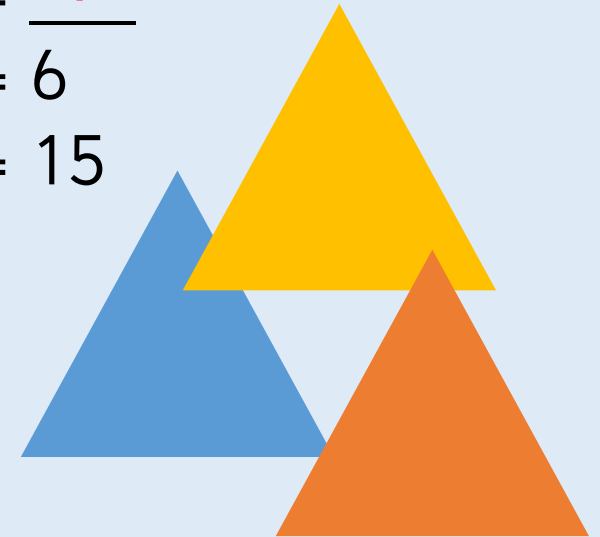
5 triangles have 15 sides.

$$1 \times 3 = 3$$

$$\underline{3} \times \underline{3} = \underline{9}$$

$$\underline{2} \times \underline{3} = 6$$

$$\underline{5} \times \underline{3} = 15$$



Activity 1

The 3 Times Table

Complete the number sentences.

1 triangle has 3 sides.

4 triangles have ____ sides.

____ triangles have 9 sides.

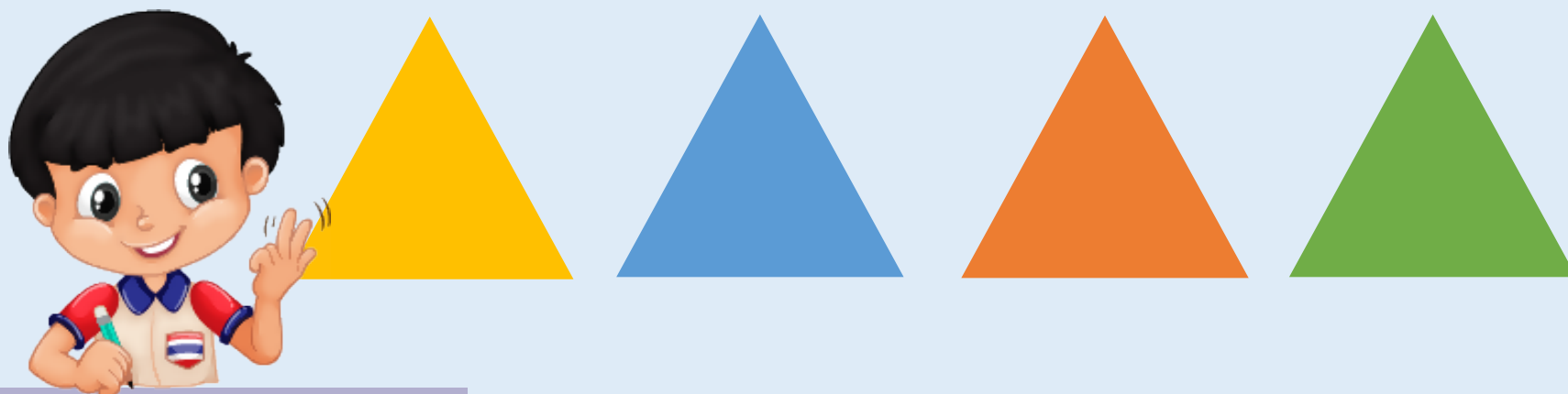
____ triangles have 18 sides.

$$1 \times 3 = 3$$

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

$$\underline{\quad} \times \underline{\quad} = 9$$

$$\underline{\quad} \times \underline{\quad} = 18$$



Activity 1

The 3 Times Table

Complete the number sentences.

1 triangle has 3 sides.

4 triangles have 12 sides.

3 triangles have 9 sides.

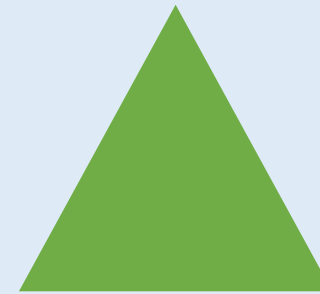
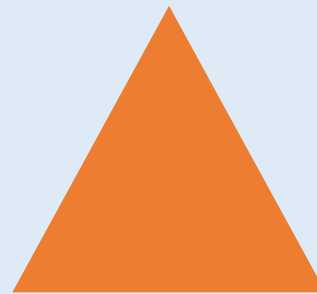
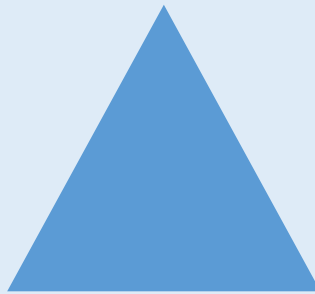
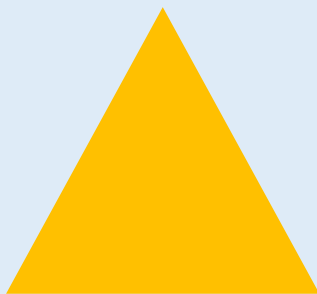
6 triangles have 18 sides.

$$1 \times 3 = 3$$

$$\underline{4} \times \underline{3} = \underline{12}$$

$$\underline{3} \times \underline{3} = 9$$

$$\underline{6} \times \underline{3} = 18$$



Activity 2

The 3 Times Table

Tick the number sentences that can be solved using the image.



$$12 \div 3 = 4$$

$$4 \times 3 = 12$$

$$3 \div 4 = 12$$

$$12 \div 4 = 3$$

$$3 \times 12 = 4$$

$$3 \times 4 = 12$$



What other times tables will help you with this times table?

Activity 2

The 3 Times Table

Tick the number sentences that can be solved using the image.



$$12 \div 3 = 4$$



$$4 \times 3 = 12$$

$$3 \div 4 = 12$$



$$12 \div 4 = 3$$

$$3 \times 12 = 4$$



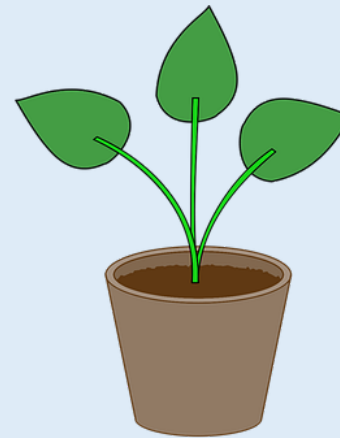
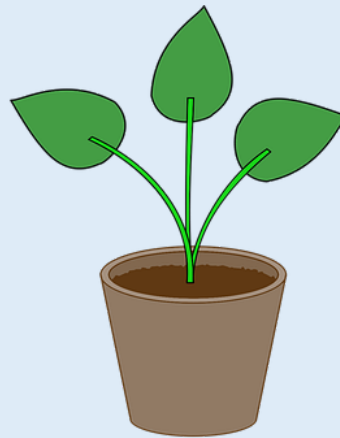
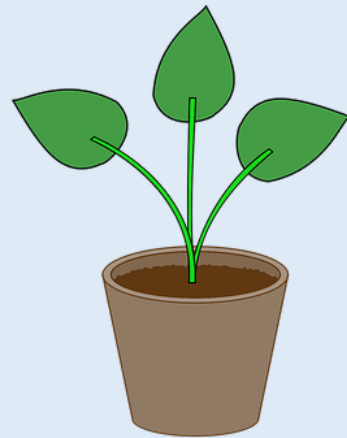
$$3 \times 4 = 12$$



Activity 2

The 3 Times Table

Tick the number sentences that can be solved using the image.



$$9 \div 3 = 3$$

$$3 \div 3 = 9$$

$$3 \times 3 = 9$$

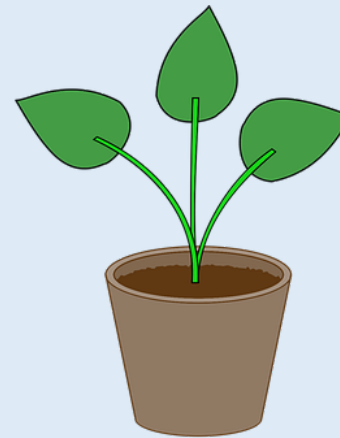
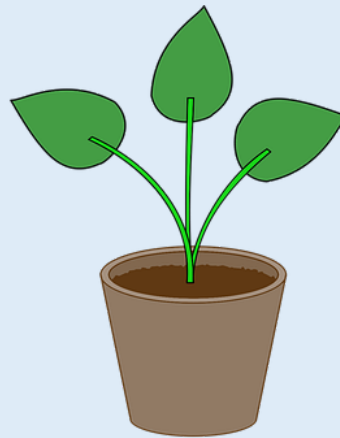
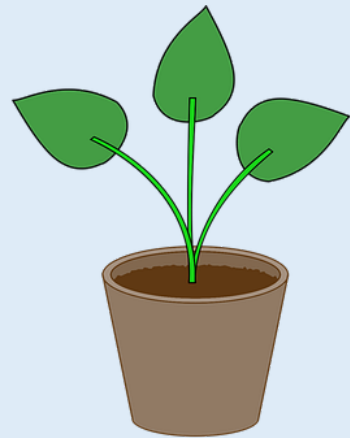
$$3 \div 9 = 3$$



Activity 2

The 3 Times Table

Tick the number sentences that can be solved using the image.



$$9 \div 3 = 3$$

$$3 \div 3 = 9$$



$$3 \times 3 = 9$$

$$3 \div 9 = 3$$

Activity 2

The 3 Times Table

Tick the number sentences that can be solved using the image.



$$2 \div 6 = 3$$

$$2 \times 3 = 6$$

$$3 \times 2 = 6$$

$$6 \div 2 = 3$$

Activity 2

The 3 Times Table

Tick the number sentences that can be solved using the image.



$$2 \div 6 = 3$$

✓ $2 \times 3 = 6$

✓ $3 \times 2 = 6$

$$6 \div 2 = 3$$

Activity 3

The 3 Times Table

Fill in the missing number facts.

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

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

$$2 \times \underline{\quad} = 6$$

$$8 \times \underline{\quad} = 24$$

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

$$6 \times 3 = \underline{\quad}$$

$$9 \times 3 = \underline{\quad}$$

$$21 = \underline{\quad} \times 3$$



Can you use concrete or pictorial representations to help you?

Activity 3

The 3 Times Table

Fill in the missing number facts.

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

$$\underline{10} \times 3 = 30$$

$$2 \times \underline{3} = 6$$

$$8 \times \underline{3} = 24$$

$$\underline{9} = 3 \times 3$$

$$6 \times 3 = \underline{18}$$

$$9 \times 3 = \underline{27}$$

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

Activity 3

The 3 Times Table

Fill in the missing number facts.

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

$3 \times \underline{\quad} = 24$

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

$\underline{\quad} \times 3 = 33$

$12 \times 3 = \underline{\quad}$

$\underline{\quad} \times 3 = 27$

$6 \times 3 = \underline{\quad}$

$4 \times \underline{\quad} = 12$



Activity 3

The 3 Times Table

Fill in the missing number facts.

$$3 \times 2 = \underline{6}$$

$$3 \times \underline{8} = 24$$

$$5 \times 3 = \underline{15}$$

$$\underline{11} \times 3 = 33$$

$$12 \times 3 = \underline{36}$$

$$\underline{9} \times 3 = 27$$

$$6 \times 3 = \underline{18}$$

$$4 \times \underline{3} = 12$$

Can you use concrete or pictorial representations to help you?

What other facts can you link to this one?

What other times tables will help you with this times table?

Multiply by 4 3



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Can you count in 4s?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

How does this help us to multiply by 4?

Activity 1

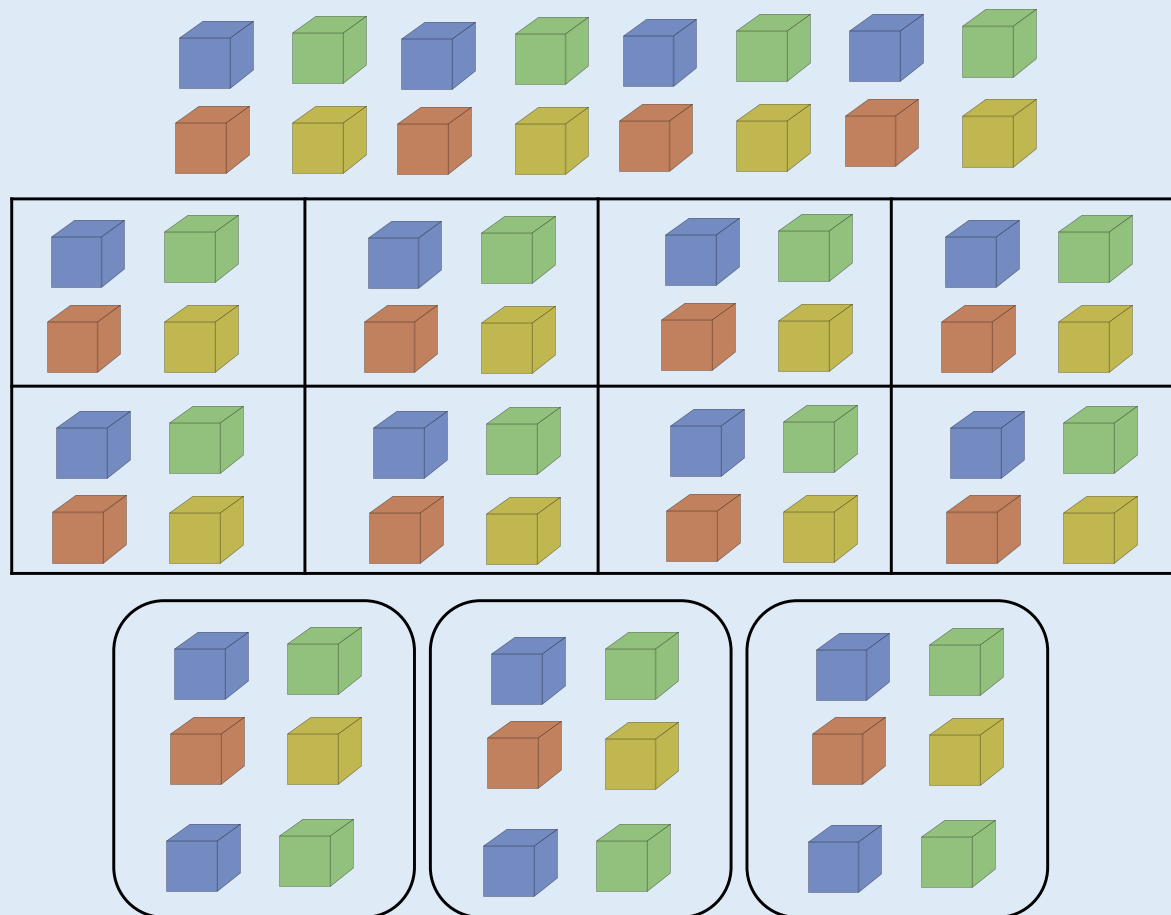
Multiply by 4

Match the multiplication to the representation.

$$8 \times 4$$

$$4 \times 4$$

$$4 \times 6$$



Can you use concrete apparatus to solve the problem?

Activity 1

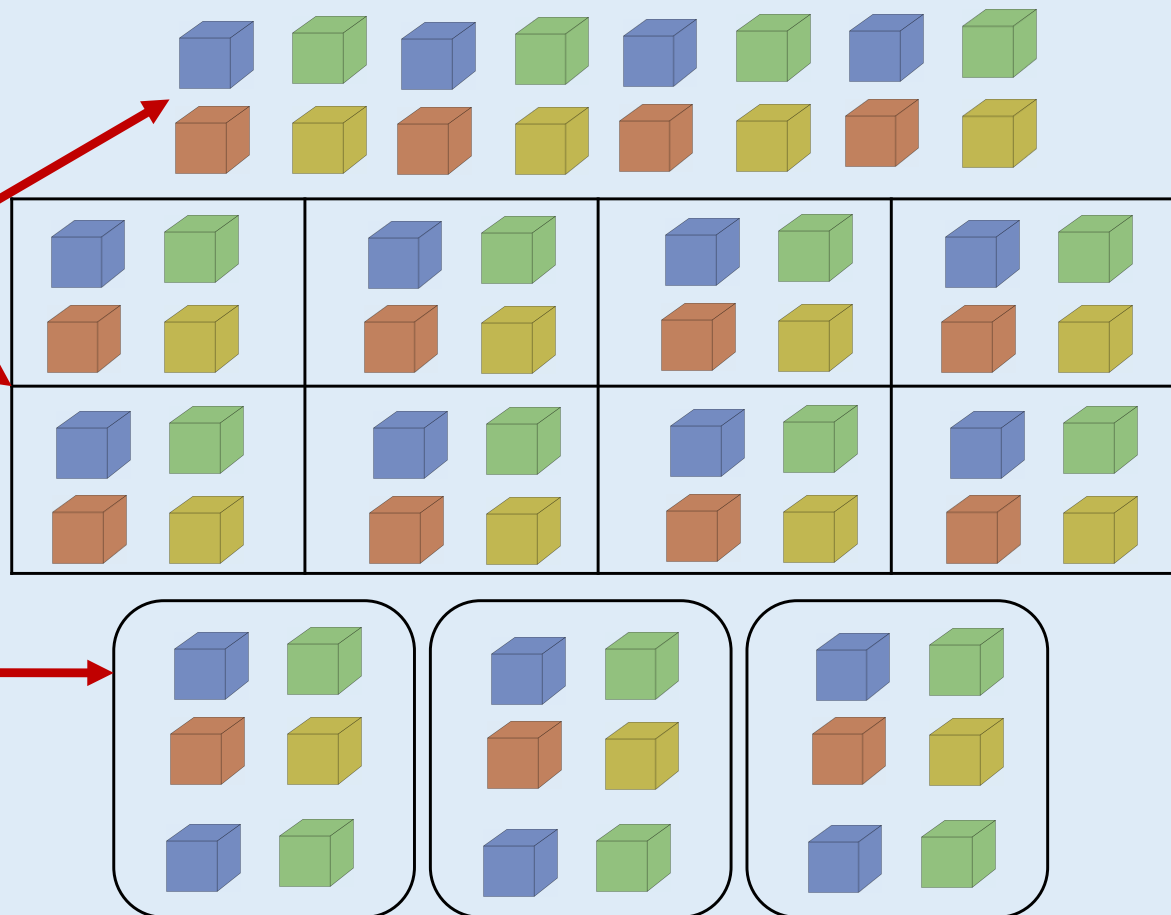
Multiply by 4

Match the multiplication to the representation.

$$8 \times 4$$

$$4 \times 4$$

$$4 \times 6$$

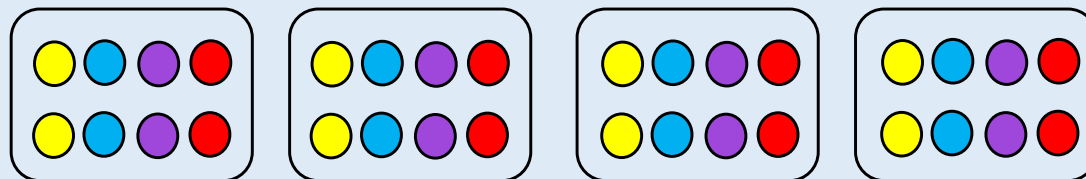


Activity 1

Multiply by 4

Match the multiplication to the representation.

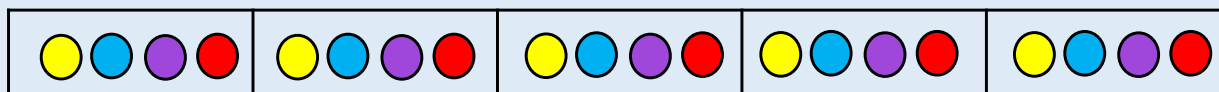
$$4 \times 4$$



$$4 \times 8$$



$$5 \times 4$$



Activity 1

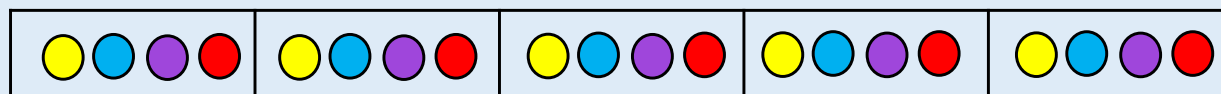
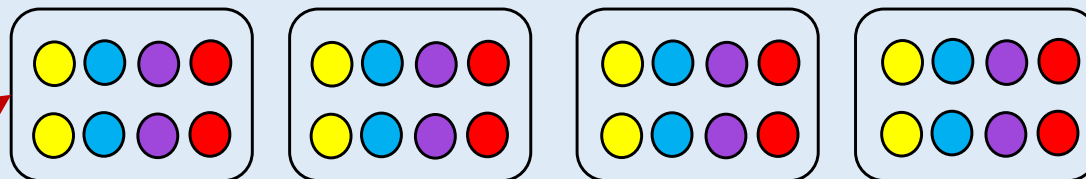
Multiply by 4

Match the multiplication to the representation.

$$4 \times 4$$

$$4 \times 8$$

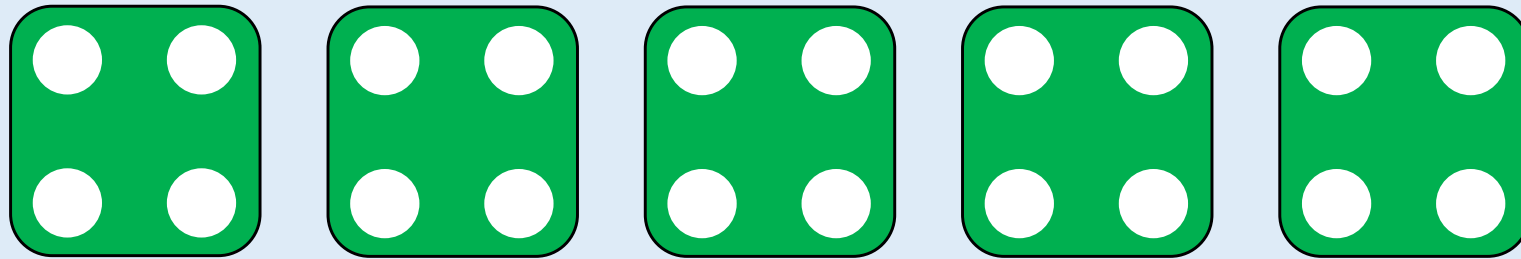
$$5 \times 4$$



Activity 2

Multiply by 4

How many dots are there altogether?



There are _____ dice with _____ dots on each.

There are _____ fours.

_____ x _____ = _____ dots.

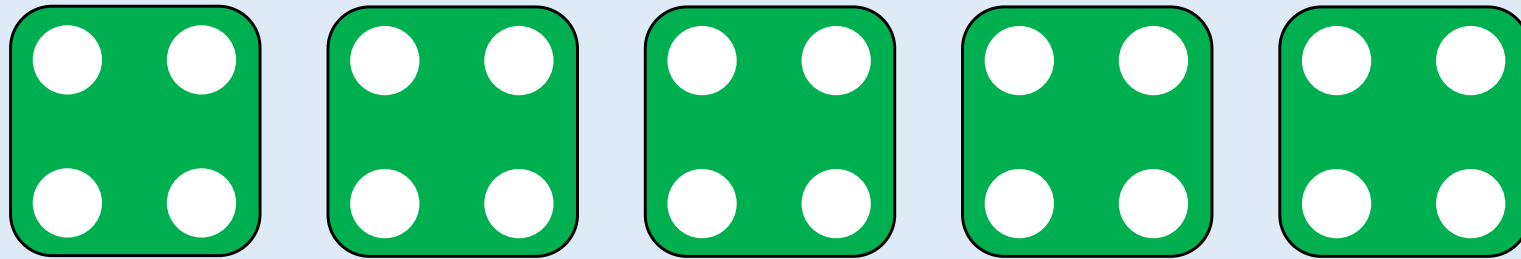


How many groups of 4 do we have?

Activity 2

Multiply by 4

How many dots are there altogether?



There are 5 dice with 4 dots on each.

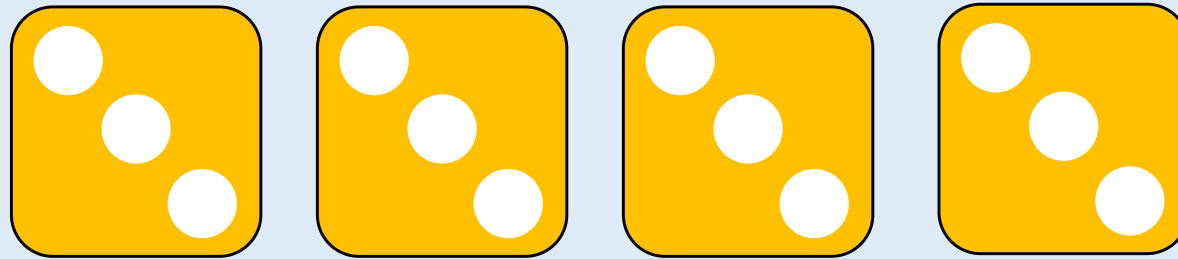
There are 5 fours.

5 x 4 = 20 dots.

Activity 2

Multiply by 4

How many dots are there altogether?



There are _____ dice with _____ dots on each.

There are _____ threes.

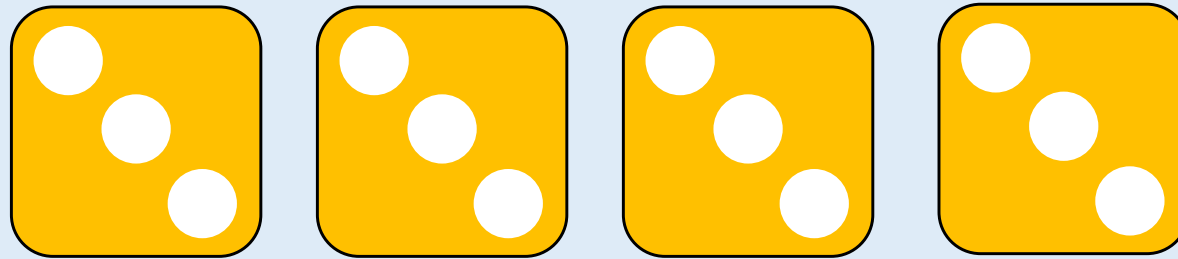
_____ x _____ = _____ dots.



Activity 2

Multiply by 4

How many dots are there altogether?



There are 4 dice with 3 dots on each.

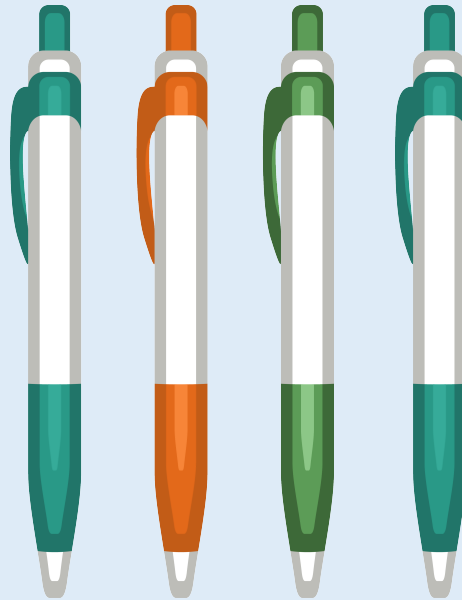
There are 4 threes.

$$\underline{4} \times \underline{3} = \underline{12} \text{ dots.}$$

Activity 3

Multiply by 4

There are 4 pens in a pack.
How many pens are there in 7 packs?

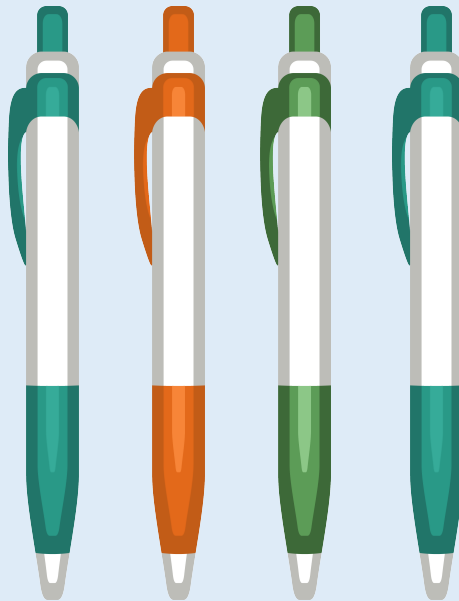


Can you write a number sentence to show this?

Activity 3

Multiply by 4

There are 4 pens in a pack.
How many pens are there in 7 packs?



$$4 \times 7 = 28$$

There are 28 pens.

Activity 3

Multiply by 4

There are 3 sweets in a pack.
How many sweets are there in 8 packs?



Activity 3

Multiply by 4

There are 3 sweets in a pack.
How many sweets are there in 8 packs?



$3 \times 8 = 24$
There are 24 sweets.

How many equal groups do we have?

How many are in each group?

How many do we have altogether?

Can you write a number sentence to show this?

Can you represent the problem in a picture?

Can you use concrete apparatus to solve the problem?

How many lots of 4 do we have?

How many groups of 4 do we have?

Divide by 4
3



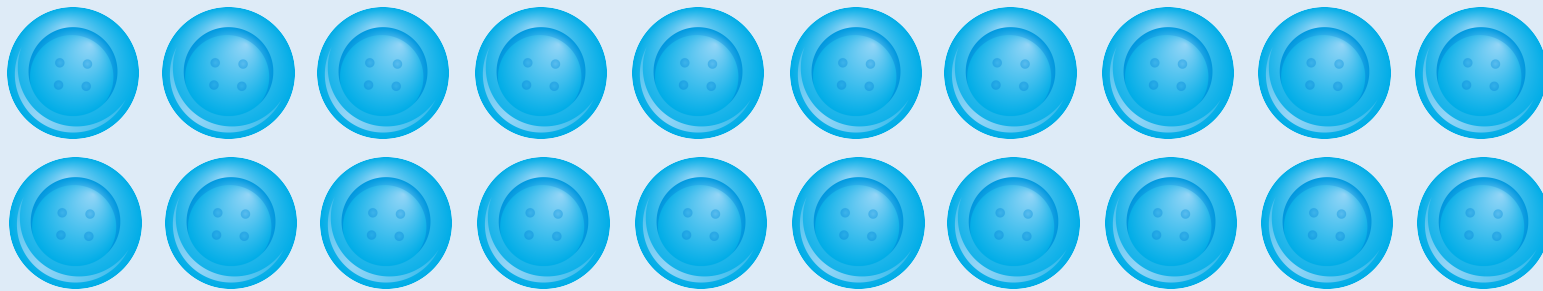
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Activity 1

Divide by 4

Circle the buttons in groups of 4.



Can you also split the buttons into 4 equal groups?
How is this the same? How is it different?



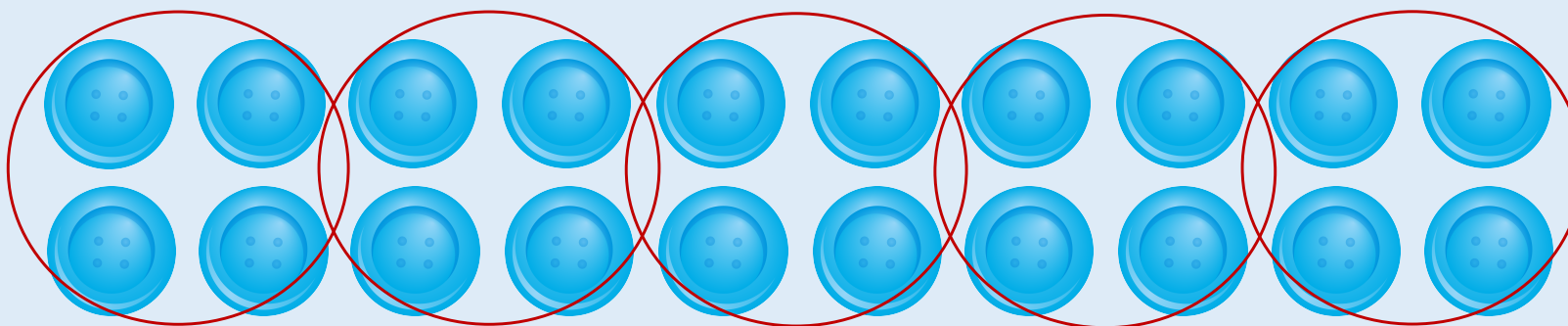
Can you groups the numbers in fours?

Activity 1

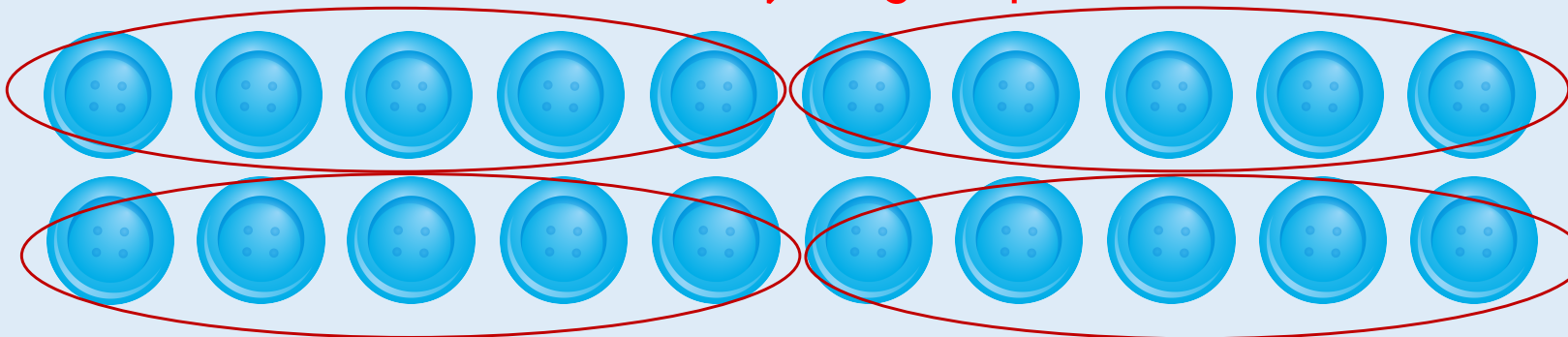
Divide by 4

Circle the buttons in groups of 4.

Groups of four



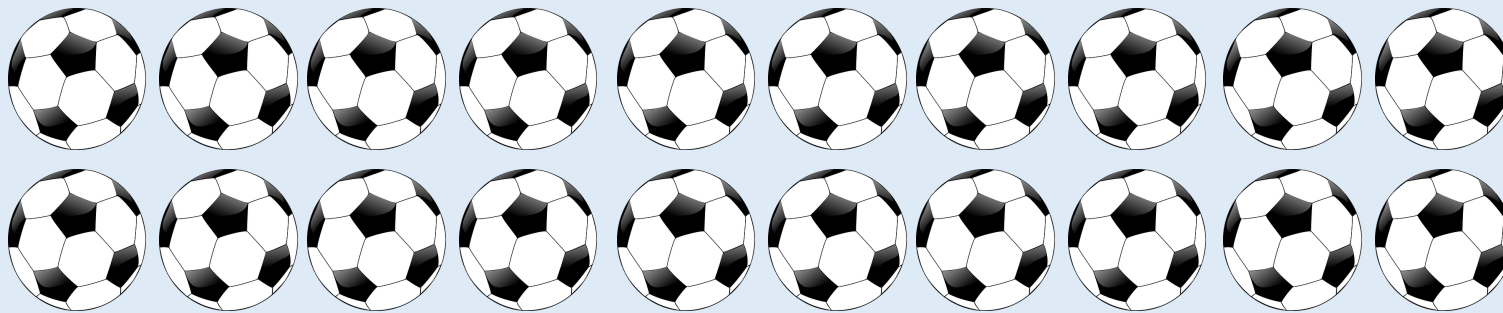
Four equal groups



Activity 1

Divide by 4

Circle the footballs in groups of 4.



Can you also split the footballs into 4 equal groups?
How is this the same? How is it different?

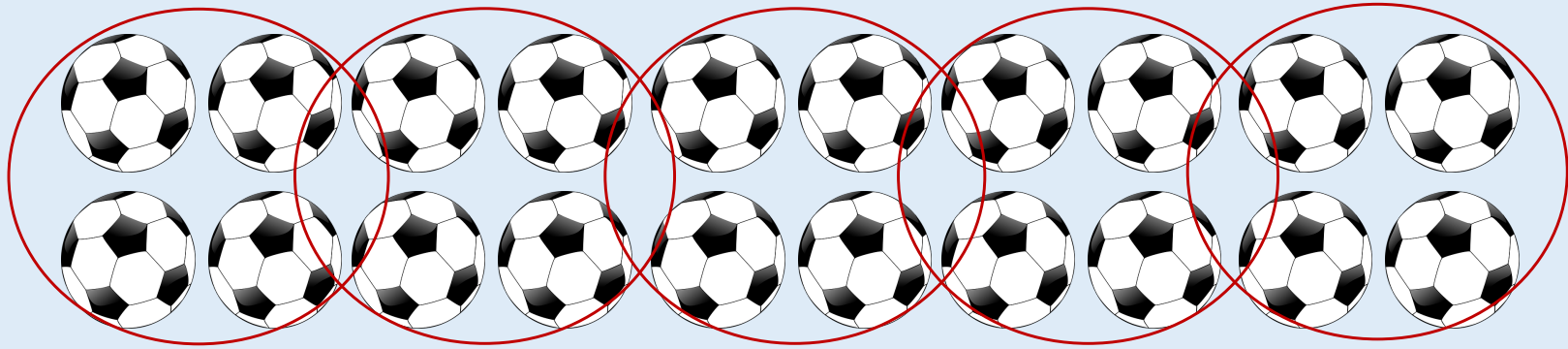


Activity 1

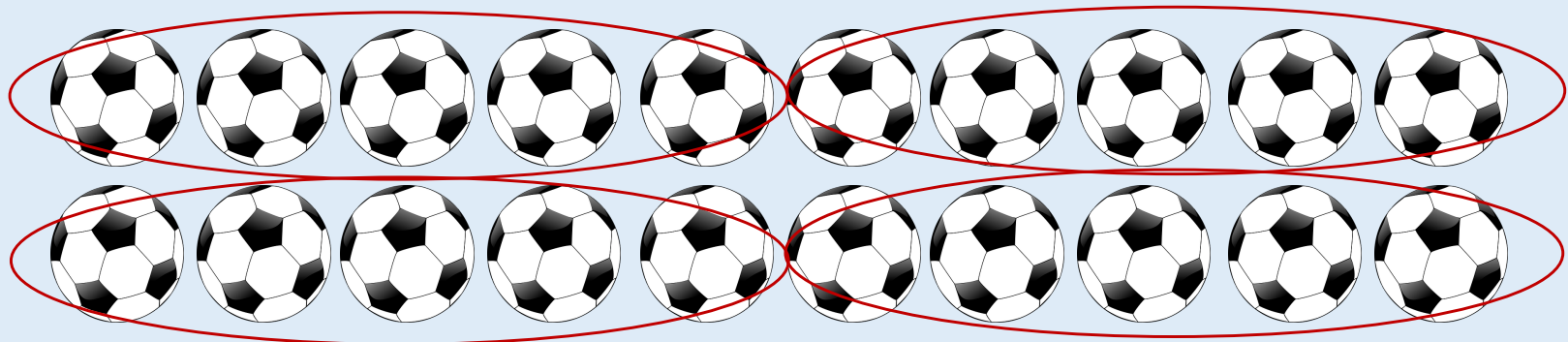
Divide by 4

Circle the footballs in groups of 4.

Groups of four



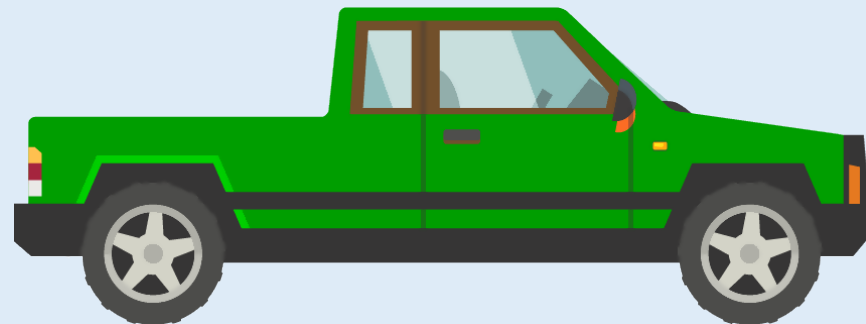
Four equal groups



Activity 2

Divide by 4

There are some cars in a car park. Each car has 4 wheels.
In the car park there are 32 wheels altogether.
How many cars are there?



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



Can you groups the numbers in fours?

Activity 2

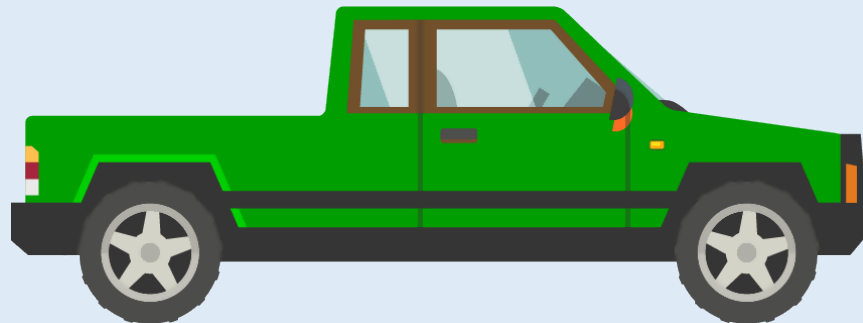
Divide by 4

There are some cars in a car park. Each car has 4 wheels.
In the car park there are 32 wheels altogether.
How many cars are there?



$$\underline{32} \div \underline{4} = \underline{8}$$

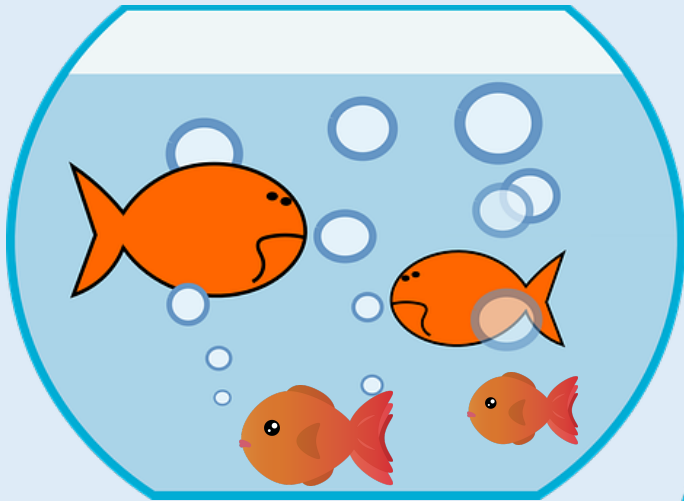
There are 8 cars.



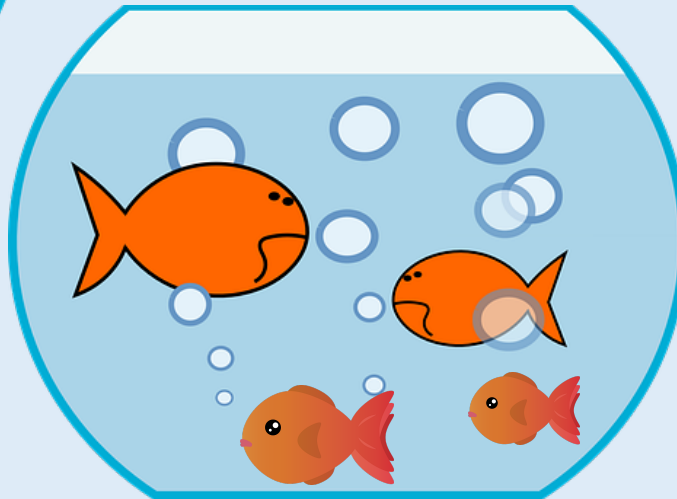
Activity 2

Divide by 4

There are some fish tanks in an aquarium. Each tank has 4 fish.
In the aquarium there are 20 fish altogether.
How many tanks are there?



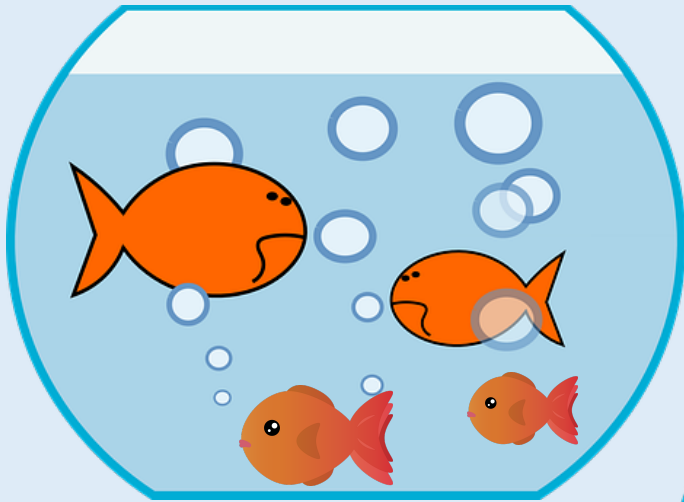
$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



Activity 2

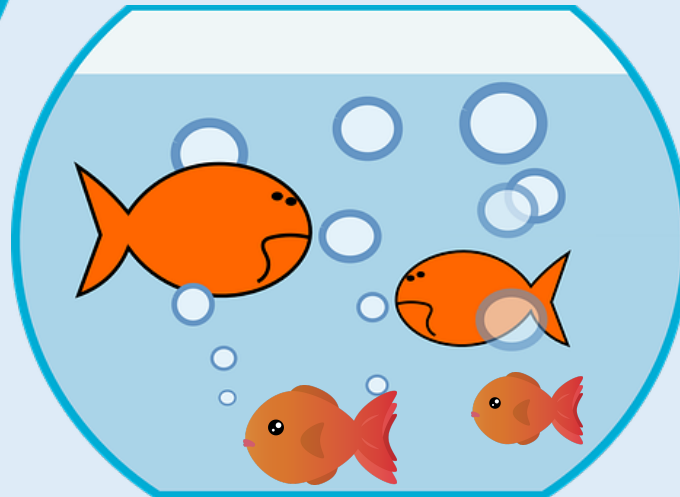
Divide by 4

There are some fish tanks in an aquarium. Each tank has 4 fish.
In the aquarium there are 20 fish altogether.
How many tanks are there?



$$\underline{20} \div \underline{4} = \underline{5}$$

There are 5 tanks.



Activity 2

Divide by 4

There are some cars in a car park. Each car has 4 wheels.
In the car park there are 40 wheels altogether.
How many cars are there?

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



Activity 2

Divide by 4

There are some cars in a car park. Each car has 4 wheels.
In the car park there are 40 wheels altogether.
How many cars are there?

$$\underline{40} \div \underline{4} = \underline{10}$$

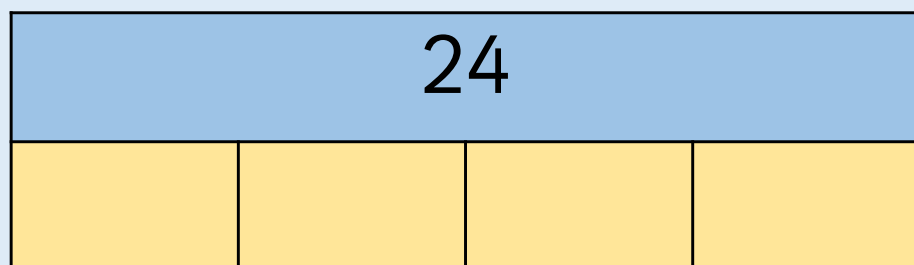
There are 10 cars.



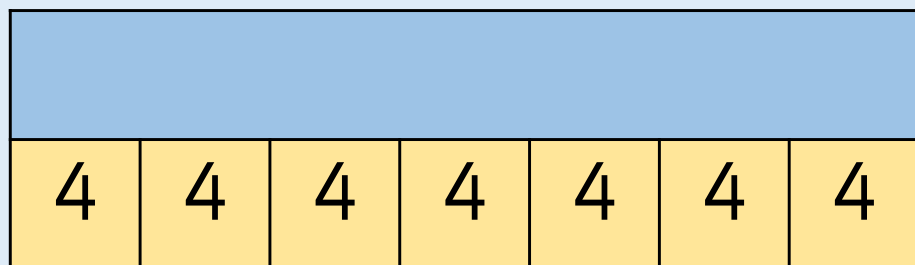
Activity 3

Divide by 4

Complete the bar models and the calculations.



$$24 \div 4 = \underline{\quad}$$



$$\underline{\quad} \div 4 = \underline{\quad}$$

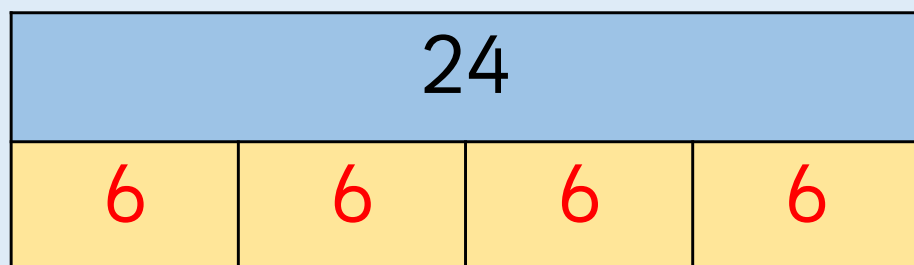


What is the difference between sharing and grouping?

Activity 3

Divide by 4

Complete the bar models and the calculations.



$$24 \div 4 = \underline{6}$$

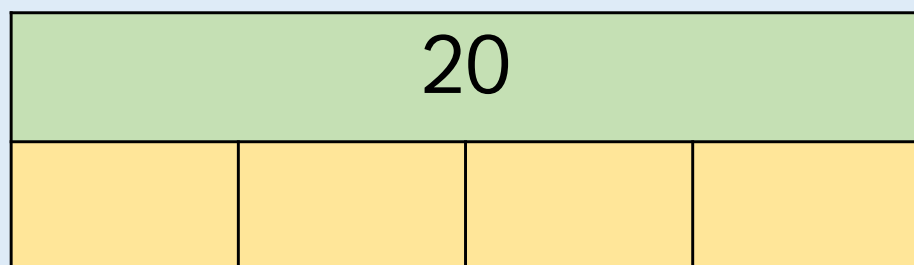


$$\underline{28} \div 4 = \underline{7}$$

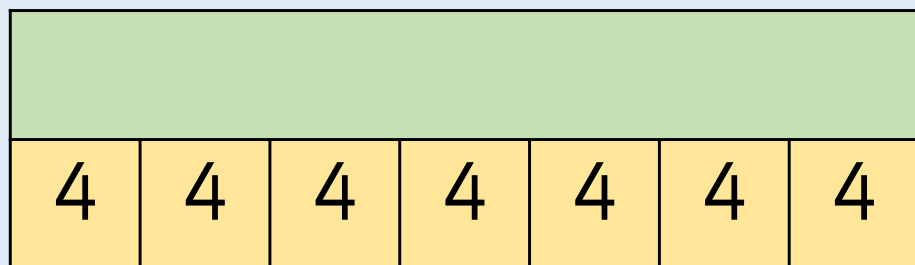
Activity 3

Divide by 4

Complete the bar models and the calculations.



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



$$\underline{\quad} \div 4 = \underline{\quad}$$

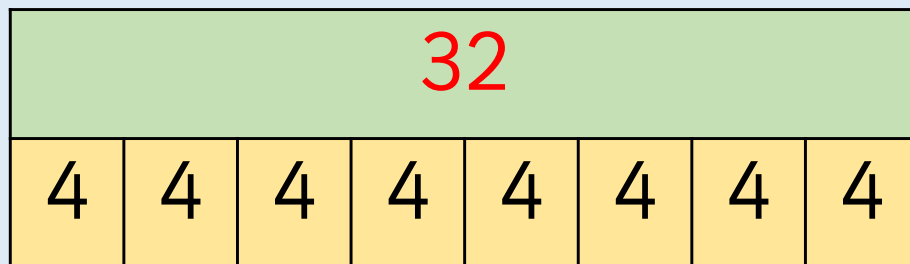
Activity 3

Divide by 4

Complete the bar models and the calculations.



$$20 \div 4 = \underline{5}$$



$$\underline{32} \div 4 = \underline{8}$$

Can you group the numbers in fours?

Can you share the number into four groups?

What is the difference between sharing and grouping?

The 4 Times Table 3



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How many of your 4 times table do you know?

Which ones do you need to practise?

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

$$4 \times 5 = \underline{\quad}$$

$$12 \times 4 = \underline{\quad}$$

$$7 \times 4 = \underline{\quad}$$

$$4 \times 11 = \underline{\quad}$$

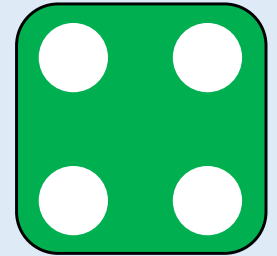
$$0 \times 4 = \underline{\quad}$$

Activity 1

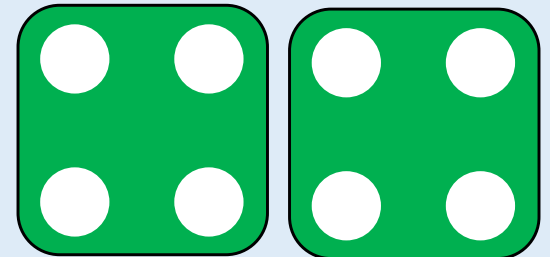
The 4 Times Table

Use the pictorial representations to complete the calculations.

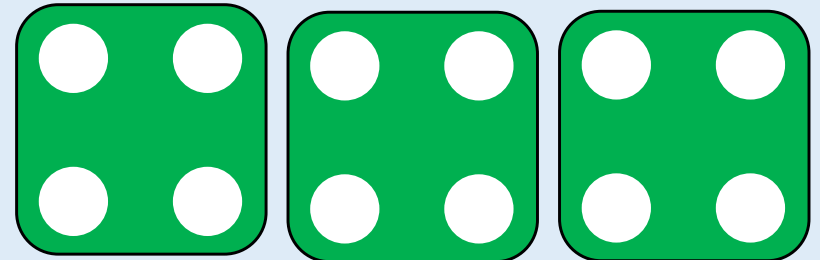
$$4 = 1 \times 4 = \underline{\quad}$$



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



$$4 + 4 + 4 = 3 \times 4 = \underline{\quad}$$



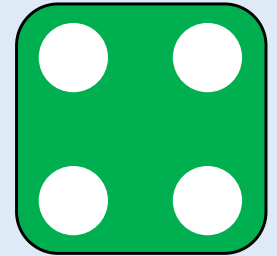
What do you notice about the pattern?

Activity 1

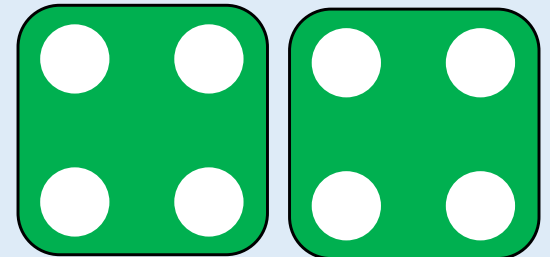
The 4 Times Table

Use the pictorial representations to complete the calculations.

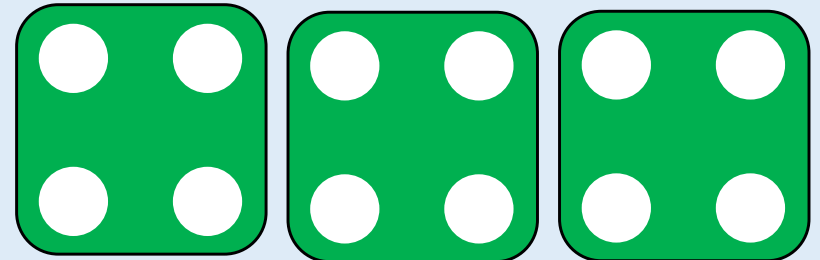
$$4 = 1 \times 4 = \underline{4}$$



$$4 + 4 = 2 \times 4 = \underline{8}$$



$$4 + 4 + 4 = 3 \times 4 = \underline{12}$$



Activity 1

The 4 Times Table

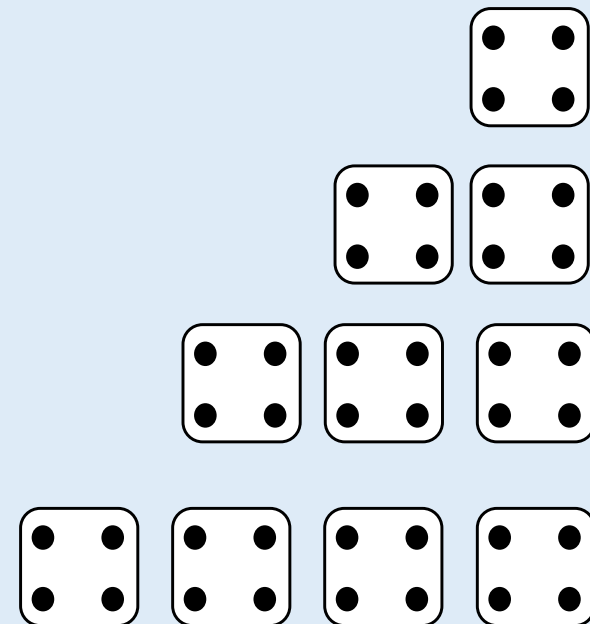
Use the pictorial representations to complete the calculations.

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

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

$$4 + 4 + 4 = 3 \times 4 = \underline{\quad}$$

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



Activity 1

The 4 Times Table

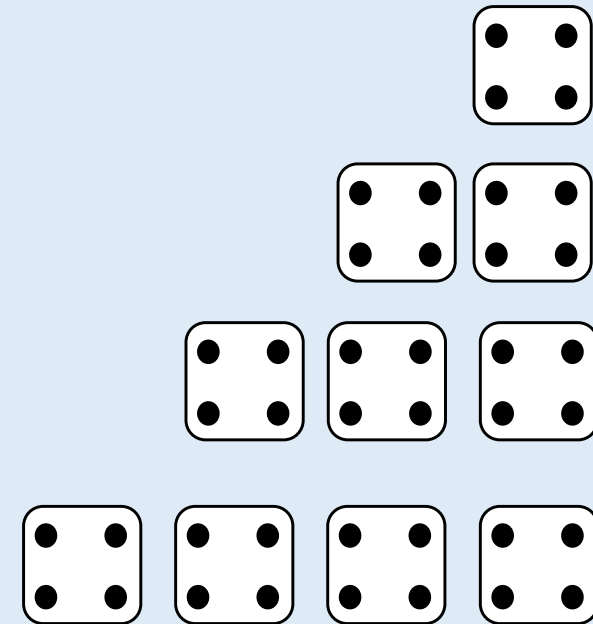
Use the pictorial representations to complete the calculations.

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

$$4 + 4 = 2 \times 4 = \underline{8}$$

$$4 + 4 + 4 = 3 \times 4 = \underline{12}$$

$$4 + 4 + 4 + 4 = 4 \times 4 = \underline{16}$$



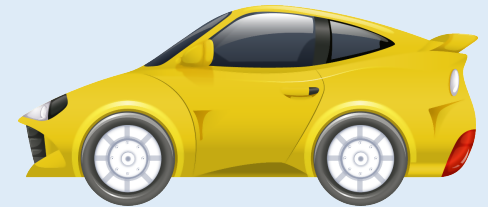
Activity 2

The 4 Times Table

2 cars have eight wheels.
How many wheels do four cars have?

$$2 \times 4 = 8$$

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



Three cows have 12 legs.
How many legs do six cows have?



$$3 \times \underline{\quad} = 12$$

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



Can you use concrete or pictorial representations to help you?

Activity 2

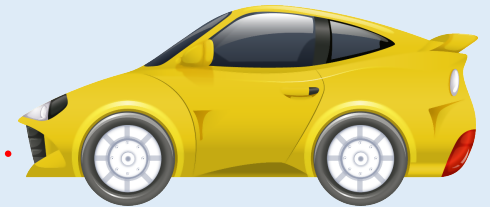
The 4 Times Table

2 cars have eight wheels.
How many wheels do four cars have?

$$2 \times 4 = 8$$

$$4 \times 4 = \underline{16}$$

Four cars have 16 wheels.

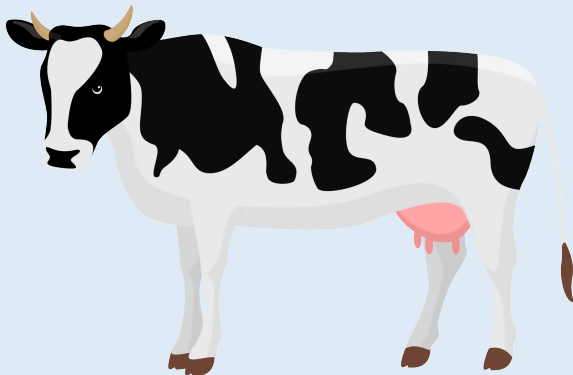


Three cows have 12 legs.
How many legs do six cows have?

$$3 \times \underline{4} = 12$$

$$6 \times \underline{4} = \underline{24}$$

Six cows have 24 legs.



Activity 2

The 4 Times Table

3 cars have twelve wheels.
How many wheels do five cars have?



$$3 \times 4 = 12$$

$$5 \times 4 = \underline{\quad}$$

Five horses have 20 legs.
How many legs do ten horses have?

$$5 \times \underline{\quad} = 20$$

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



Activity 2

The 4 Times Table

3 cars have twelve wheels.
How many wheels do five cars have?



$$3 \times 4 = 12$$

$$5 \times 4 = \underline{20}$$

Five cars have 20 wheels.

Five horses have 20 legs.
How many legs do ten horses have?

$$5 \times \underline{4} = 20$$

$$10 \times \underline{4} = \underline{40}$$

Ten horses have 40 legs.



Activity 3

The 4 Times Table

Colour in the multiples of 4.
What pattern do you notice?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50



What other times tables will help you with this times table?

Activity 3

The 4 Times Table

Colour in the multiples of 4.
What pattern do you notice?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Rows 2 and 4 have the same
pattern and rows 3 and 5 have
also the same pattern.

What do you notice about the pattern?

Can you use concrete or pictorial representations to help you?

What other facts can you link to this one?

What other times tables will help you with this times table?

Multiply by 8

3



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Can you count in 8s?

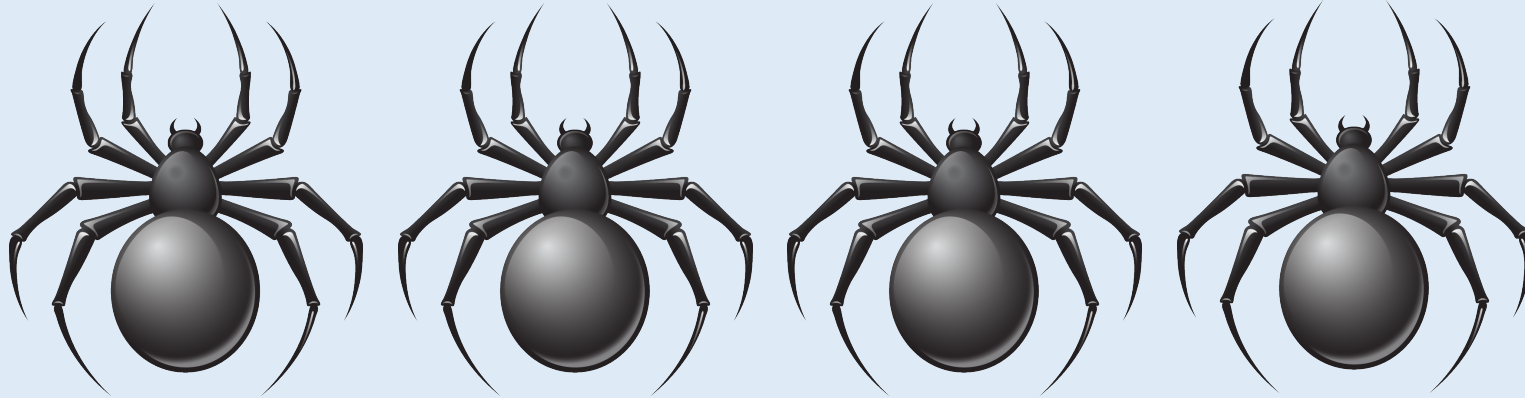
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

How does this help us to multiply by 8?

Activity 1

Multiply by 8

How many legs are there on four spiders?



_____ + _____ + _____ + _____ = _____ x _____ = _____

There are _____ legs on each spider.

If there are _____ spiders, there will be _____ legs altogether.

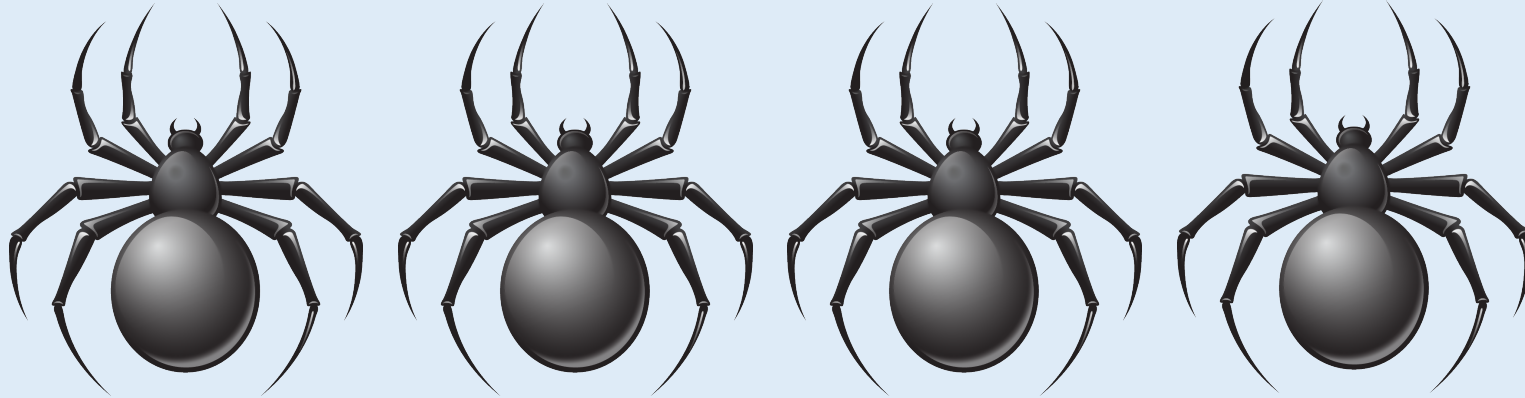


Can you write a number sentence to show this?

Activity 1

Multiply by 8

How many legs are there on four spiders?



$$\underline{8} + \underline{8} + \underline{8} + \underline{8} = \underline{4} \times \underline{8} = \underline{32}$$

There are 8 legs on each spider.

If there are 4 spiders, there will be 32 legs altogether.

Activity 1

Multiply by 8

How many legs are there on five spiders?



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

There are legs on each spider.

If there are spiders, there will be legs altogether.

Activity 1

Multiply by 8

How many legs are there on five spiders?



$$\underline{8} + \underline{8} + \underline{8} + \underline{8} + \underline{8} = \underline{5} \times \underline{8} = \underline{40}$$

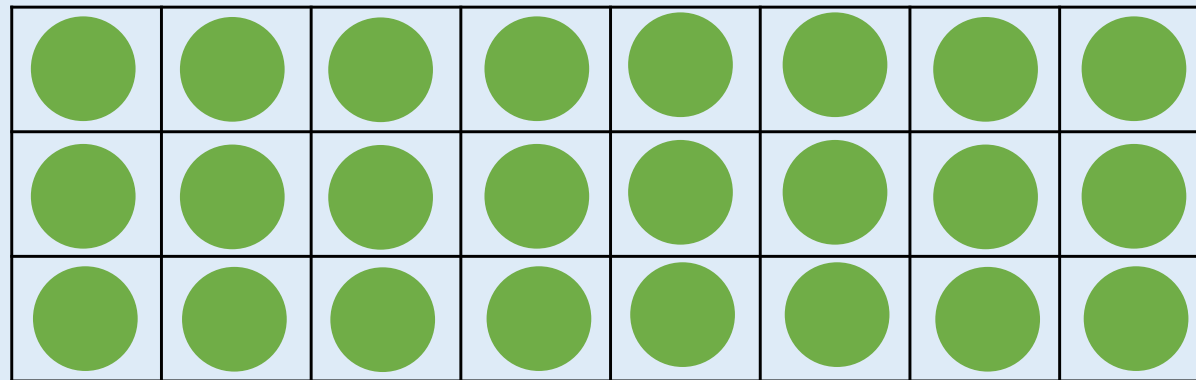
There are 8 legs on each spider.

If there are 5 spiders, there will be 40 legs altogether.

Activity 2

Multiply by 8

Arrange 24 counters in an array as shown and complete the calculations.



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

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

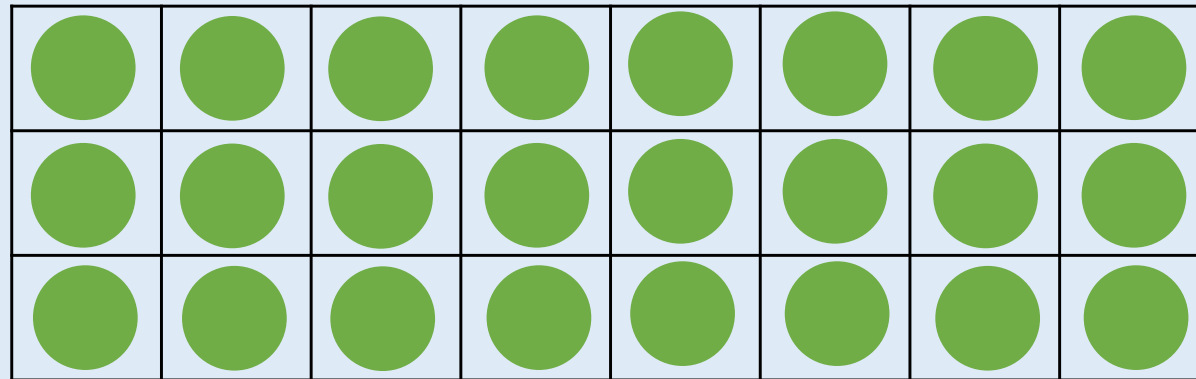


How many equal groups do we have?

Activity 2

Multiply by 8

Arrange 24 counters in an array as shown and complete the calculations.



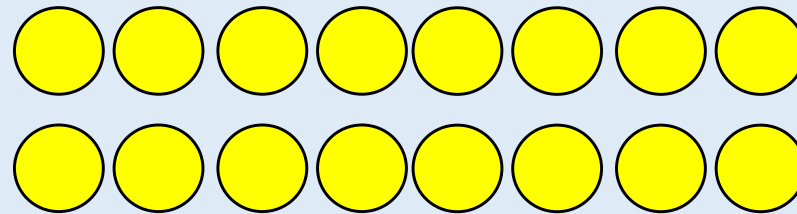
$$\underline{8} + \underline{8} + \underline{8} = \underline{3} \times \underline{8} = \underline{24}$$

$$\begin{array}{ccccccccccc} \underline{3} & + & \underline{3} & + & \underline{3} & + & \underline{3} & + & \underline{3} & + & \underline{3} & + & \underline{3} & + & \underline{3} \\ & & & & & & & & & & & & & \\ & & & & & & = & \underline{8} & \times & \underline{3} & = & \underline{24} \end{array}$$

Activity 2

Multiply by 8

Arrange 16 counters in an array as shown and complete the calculations.



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

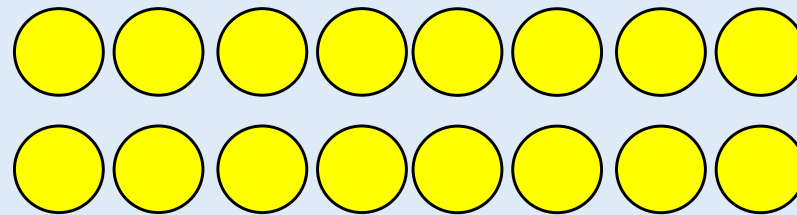
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



Activity 2

Multiply by 8

Arrange 16 counters in an array as shown and complete the calculations.



$$\underline{8} + \underline{8} = \underline{16}$$

$$\underline{2} + \underline{2} + \underline{2} + \underline{2} + \underline{2} + \underline{2} + \underline{2} + \underline{2} = \underline{16}$$

Activity 3

Multiply by 8

Fill in the table to show that multiplying by 8 is the same as double, double and double again.

6	6	6	6	6	6	6	6
6 x 2 = ____		6 x 2 = ____		6 x 2 = ____		6 x 2 = ____	
____ x 2 = ____				____ x 2 = ____			
____ x 2 = ____							



We have 8 groups, how many are in each group?

Activity 3

Multiply by 8

Fill in the table to show that multiplying by 8 is the same as double, double and double again.

6	6	6	6	6	6	6	6
6 x 2 = <u>12</u>		6 x 2 = <u>12</u>		6 x 2 = <u>12</u>		6 x 2 = <u>12</u>	
<u>12</u> x 2 = <u>24</u>				<u>12</u> x 2 = <u>24</u>			
<u>24</u> x 2 = <u>48</u>							

How many equal groups do we have?

How many are in each group?

How many do we have altogether?

Can you write a number sentence to show this?

Can you represent the problem in a picture?

Can you use concrete apparatus to solve the problem?

How many lots of 8 do we have?

How many groups of 8 do we have?

We have 8 groups, how many are in each group?

Divide by 8

3



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Activity 1

Divide by 8

There are 32 children in a PE lesson. They split into 8 equal teams for a relay race. How many children are in each team?
Use counters or multi-link to represent each child.



There are ____ teams and ____ children in each team.



What concrete/pictorial representations might help you?

Activity 1

Divide by 8

There are 32 children in a PE lesson. They split into 8 equal teams for a relay race. How many children are in each team?
Use counters or multi-link to represent each child.



$$32 \div 8 = 4$$

There are 8 teams and 4 children in each team.

Activity 1

Divide by 8

There are 72 flowers in a garden. They are shared into 8 vases for a shop. How many flowers are in each vase?
Use counters or multi-link to represent each flower.



There are ____ vases and ____ flowers in each vase.

Activity 1

Divide by 8

There are 72 flowers in a garden. They are shared into 8 vases for a shop. How many flowers are in each vase?
Use counters or multi-link to represent each flower.

$$72 \div 8 = 9$$



There are 8 vases and 9 flowers in each vase.

Activity 1

Divide by 8

There are 24 children in a PE lesson. They split into 8 equal teams for a relay race. How many children are in each team?
Use counters or multi-link to represent each child.



There are _____ teams and _____ children in each team.

Activity 1

Divide by 8

There are 24 children in a PE lesson. They split into 8 equal teams for a relay race. How many children are in each team?
Use counters or multi-link to represent each child.

$$24 \div 8 = 3$$

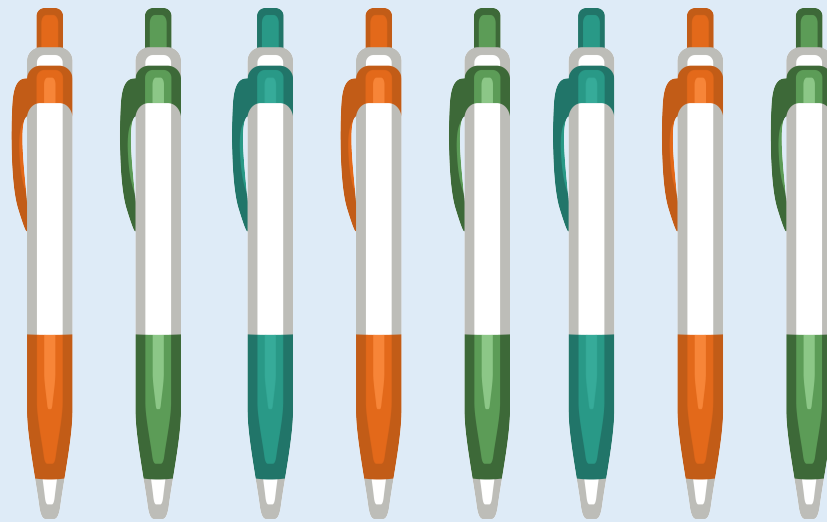


There are 8 teams and 3 children in each team.

Activity 2

Divide by 8

Pens are sold in packs of 8. Year 3 need 48 pens.
How many packs should be ordered?



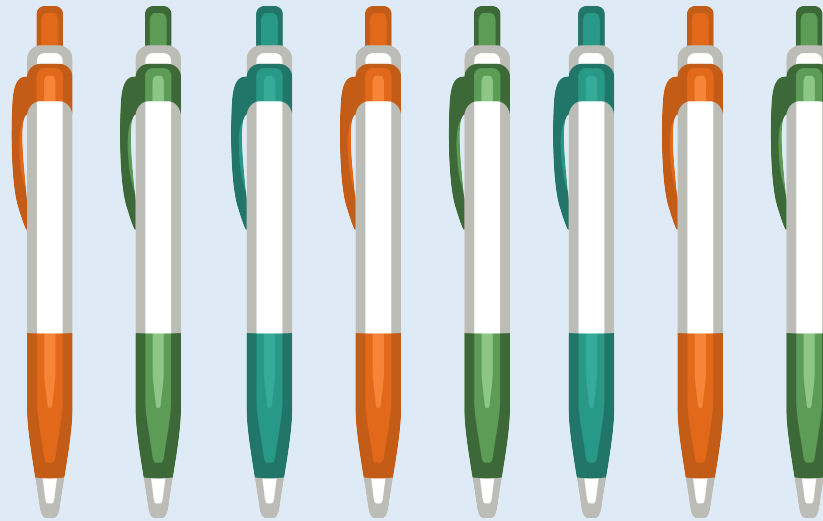
They should order ____ packs of pens.

Can you group the numbers in eights?

Activity 2

Divide by 8

Pens are sold in packs of 8. Year 3 need 48 pens.
How many packs should be ordered?



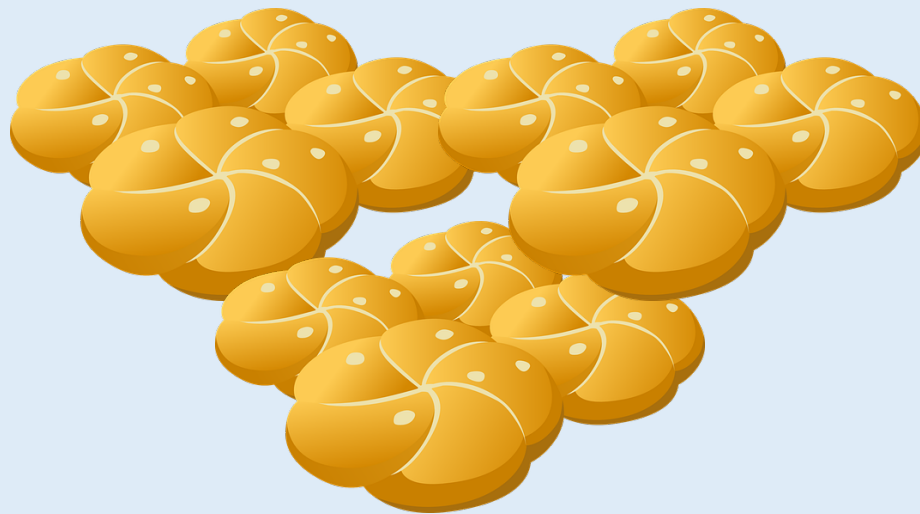
$$48 \div 8 = 6$$

They should order 6 packs of pens.

Activity 2

Divide by 8

Bread rolls are sold in packs of 8.
Tia's uncle needs 24 rolls. How many packs should he buy?

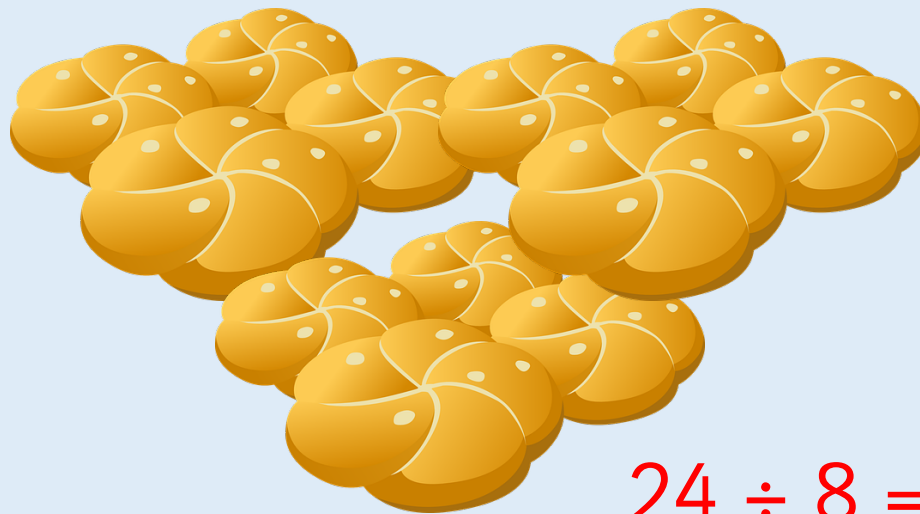


He should buy ____ packs of bread rolls.

Activity 2

Divide by 8

Bread rolls are sold in packs of 8.
Tia's uncle needs 24 rolls. How many packs should he buy?



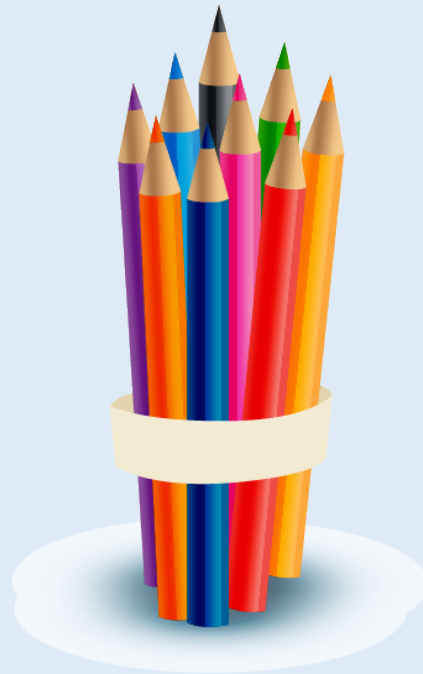
$$24 \div 8 = 3$$

He should buy 3 packs of bread rolls.

Activity 2

Divide by 8

Pencils are sold in packs of 8. Blue class needs 56 pencils. How many packs should they buy?

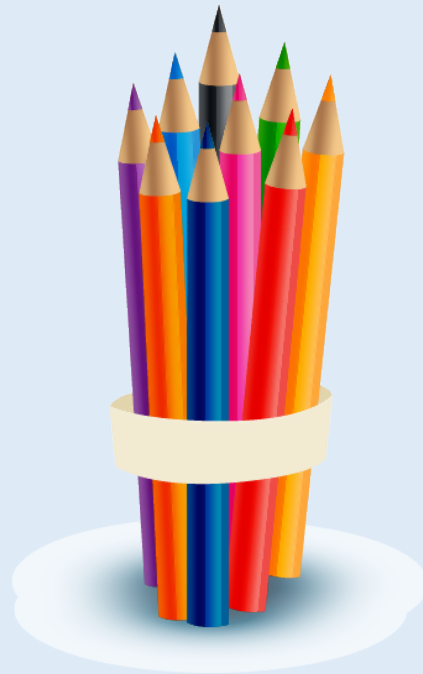


They should buy ____ packs of pencils.

Activity 2

Divide by 8

Pencils are sold in packs of 8. Blue class needs 56 pencils. How many packs should they buy?



$$56 \div 8 = 7$$

They should buy 7 packs of pencils.

Activity 3

Divide by 8

Complete the missing numbers.

$$80 \div 8 = \underline{\quad}$$

$$64 \div 8 = \underline{\quad}$$

$$\underline{\quad} \times 8 = 16$$

$$24 \div \underline{\quad} = 8$$

$$8 \times \underline{\quad} = 40$$

$$\underline{\quad} \div 8 = 4$$



Can you use any prior knowledge to check your answer?

Activity 3

Divide by 8

Complete the missing numbers.

$$80 \div 8 = \underline{10}$$

$$24 \div \underline{3} = 8$$

$$64 \div 8 = \underline{8}$$

$$8 \times \underline{5} = 40$$

$$\underline{2} \times 8 = 16$$

$$\underline{32} \div 8 = 4$$

Activity 3

Divide by 8

Complete the missing numbers.

$$88 \div 8 = \underline{\hspace{2cm}}$$

$$24 \div 8 = \underline{\hspace{2cm}}$$

$$8 \div 8 = \underline{\hspace{2cm}}$$

$$32 \div 8 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} \div 8 = 9$$

$$\underline{\hspace{2cm}} \div 8 = 2$$

$$\underline{\hspace{2cm}} \div 8 = 12$$

$$\underline{\hspace{2cm}} \div 8 = 10$$



Activity 3

Divide by 8

Complete the missing numbers.

$$88 \div 8 = \underline{11}$$

$$24 \div 8 = \underline{3}$$

$$8 \div 8 = \underline{1}$$

$$32 \div 8 = \underline{4}$$

$$\underline{72} \div 8 = 9$$

$$\underline{16} \div 8 = 2$$

$$\underline{96} \div 8 = 12$$

$$\underline{80} \div 8 = 10$$

What concrete/pictorial representations might help you?

Can you group the numbers in eights?

Can you share the number into eights groups?

Can you use any prior knowledge to check your answer?

The 8 Times Table 3



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How many of your 8 times table do you know?

-----♦

Which ones do you need to practise?

$$8 \times 2 = \underline{\quad}$$

$$7 \times 8 = \underline{\quad}$$

$$8 \times 11 = \underline{\quad}$$

$$0 \times 8 = \underline{\quad}$$

$$12 \times 8 = \underline{\quad}$$

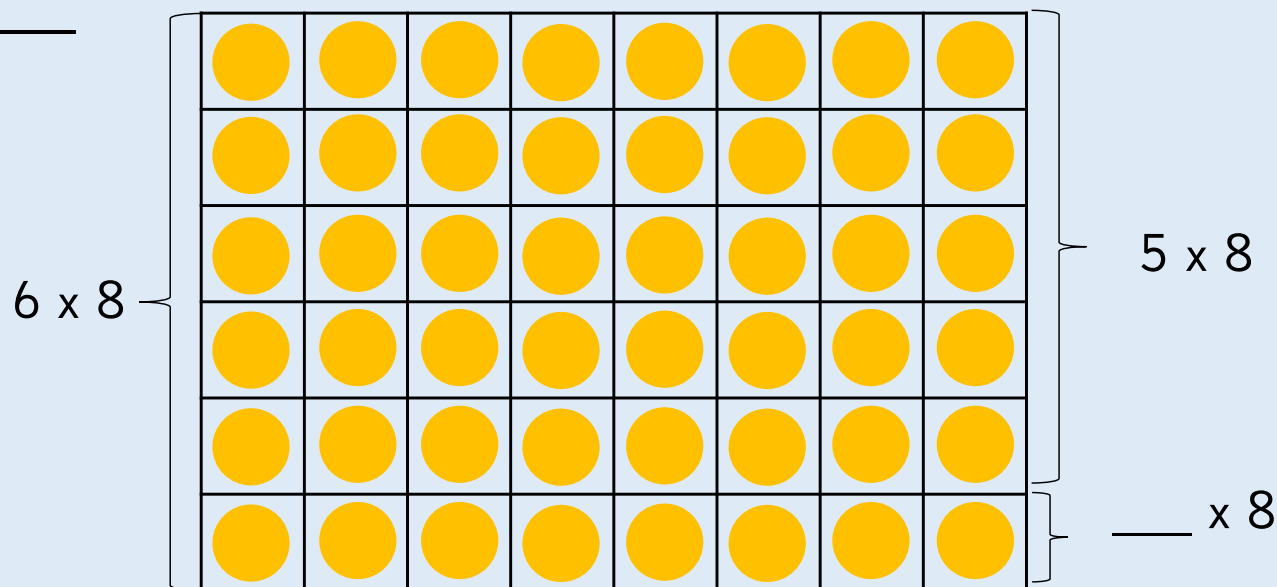
$$8 \times 5 = \underline{\quad}$$

Activity 1

The 8 Times Table

Complete the diagram using known facts.

$$\begin{array}{rcl} 6 \times 8 & \left\{ \begin{array}{l} 5 \times 8 = \underline{\quad} \\ \underline{\quad} \times 8 = \underline{\quad} \end{array} \right. \\ \hline \text{altogether } \underline{\quad} \end{array}$$



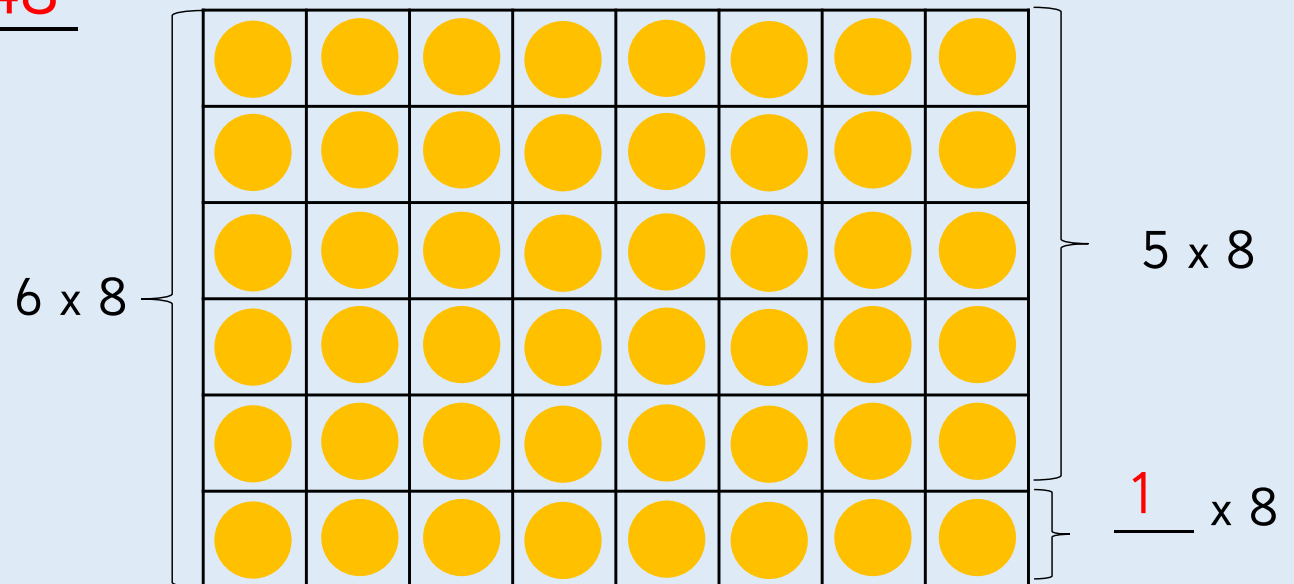
What other facts can you link to this one?

Activity 1

The 8 Times Table

Complete the diagram using known facts.

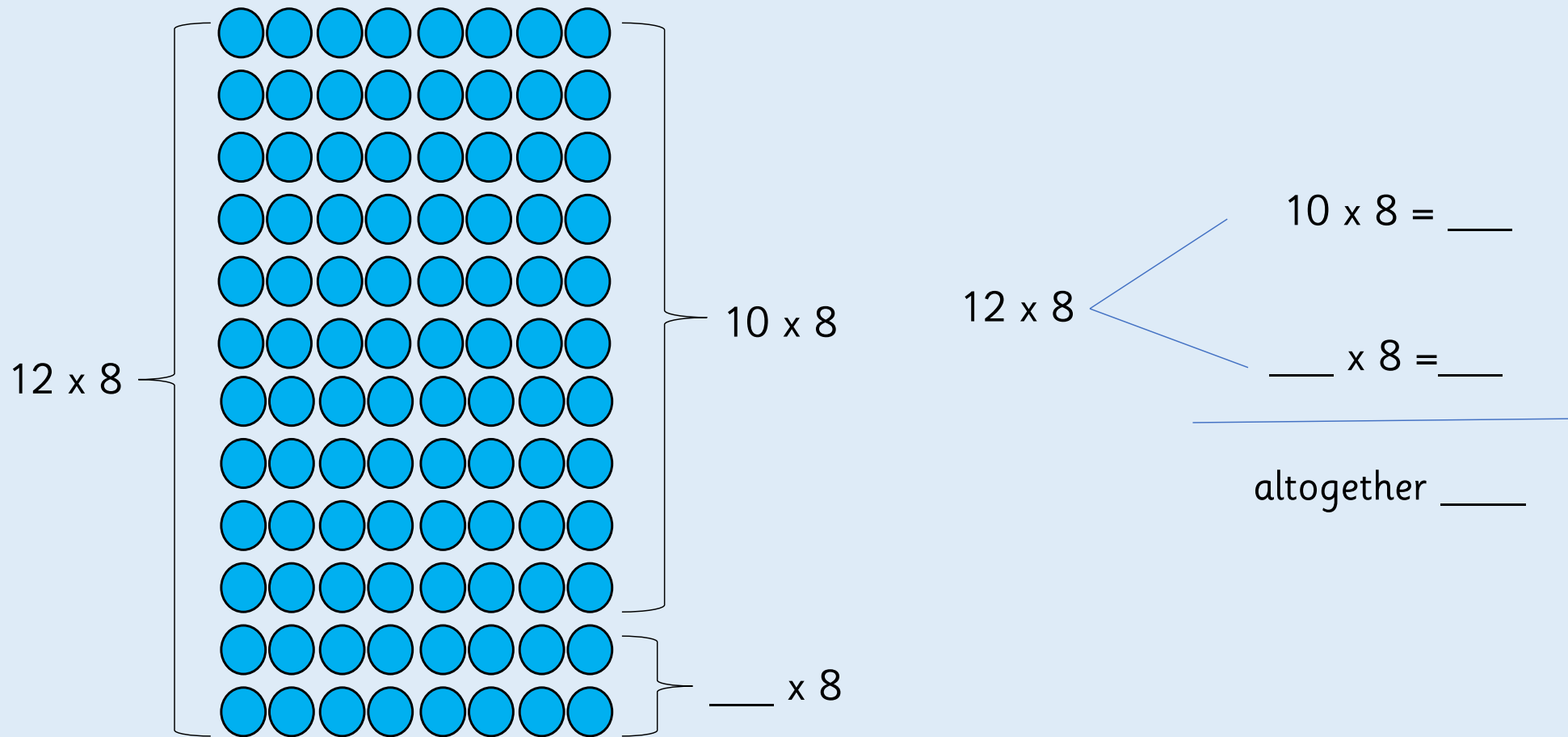
$$\begin{array}{r} 6 \times 8 \\ \left\{ \begin{array}{l} 5 \times 8 = \underline{40} \\ \underline{1} \times 8 = \underline{8} \end{array} \right. \\ \hline \text{altogether } \underline{48} \end{array}$$



Activity 1

The 8 Times Table

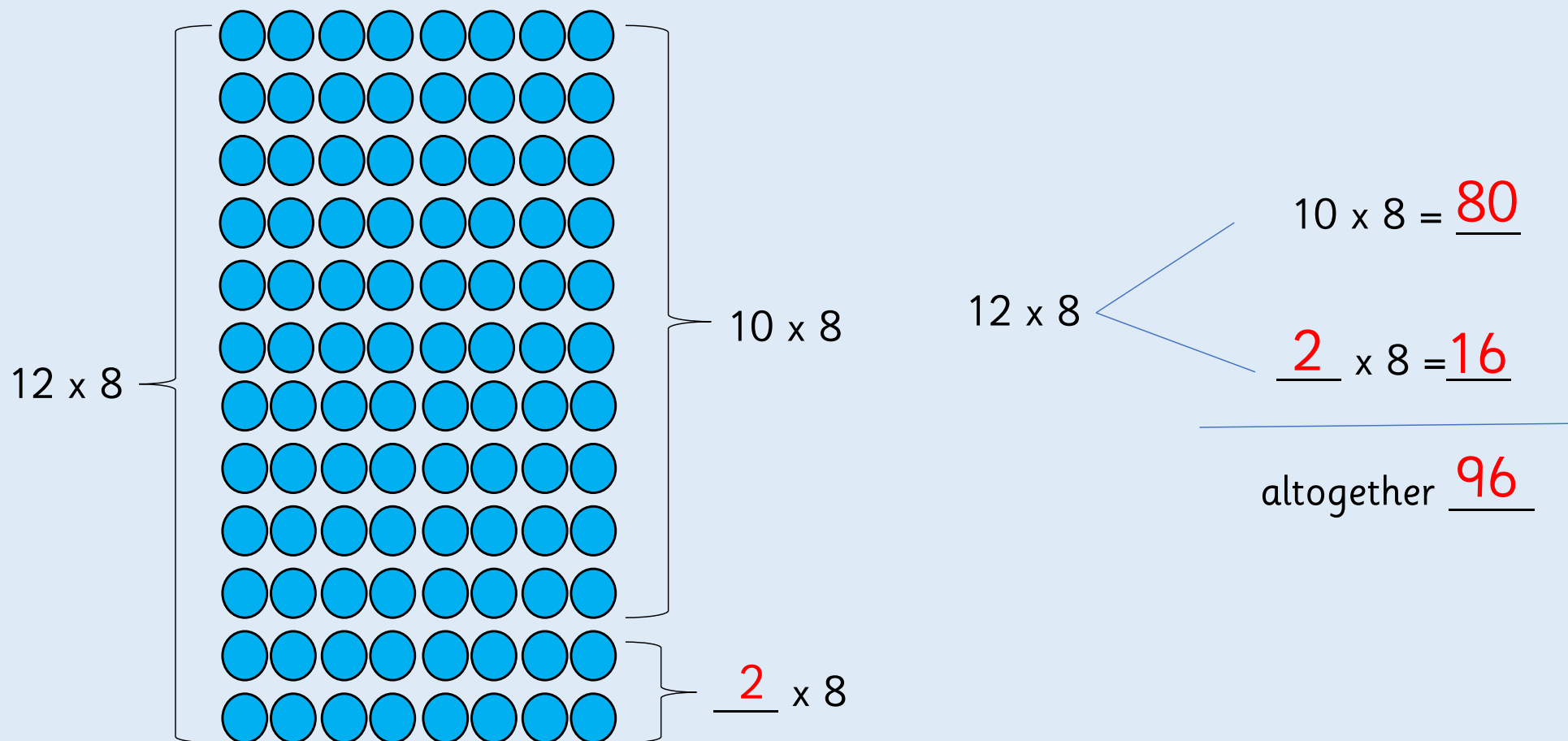
Complete the diagram using known facts.



Activity 1

The 8 Times Table

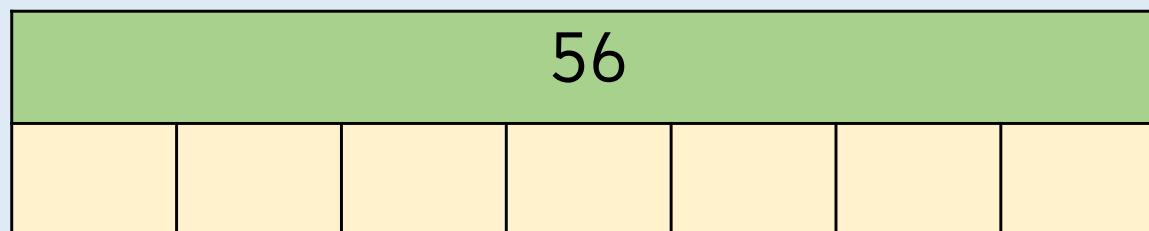
Complete the diagram using known facts.



Activity 2

The 8 Times Table

Complete the bar model.

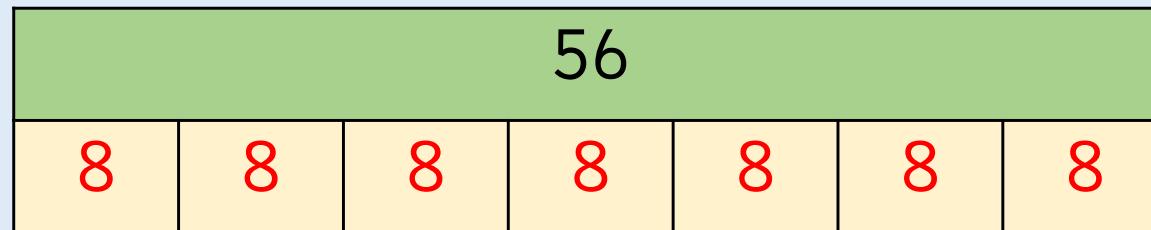


Can you use concrete or pictorial representations to help you?

Activity 2

The 8 Times Table

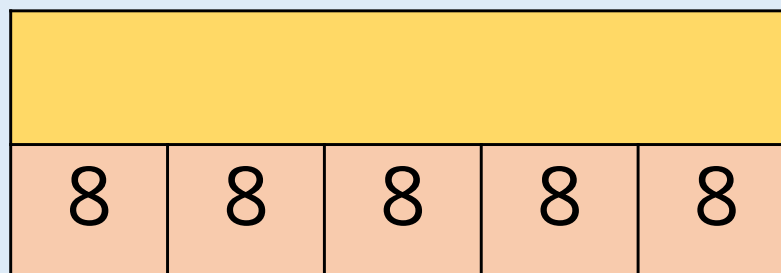
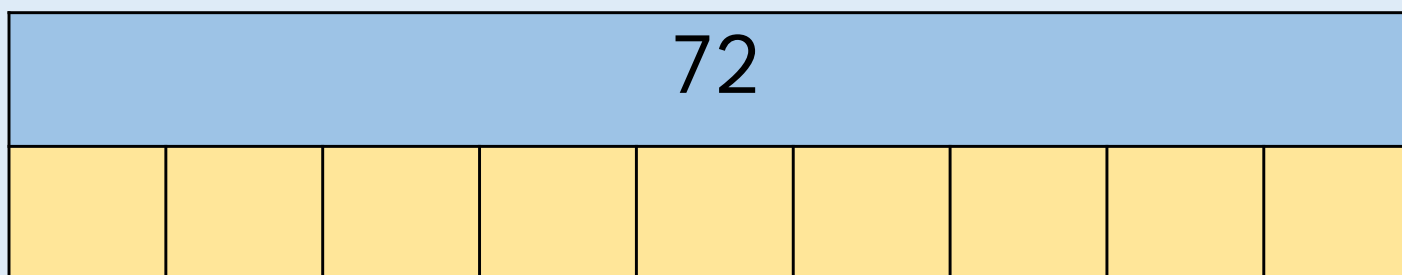
Complete the bar model.



Activity 2

The 8 Times Table

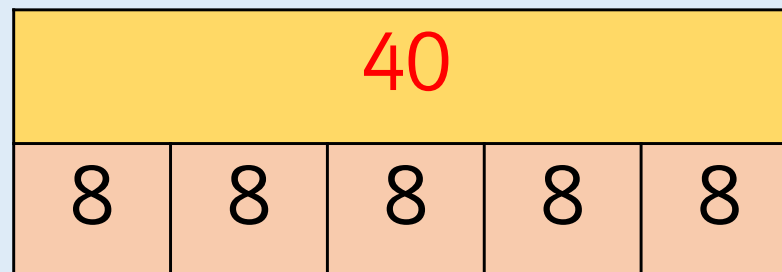
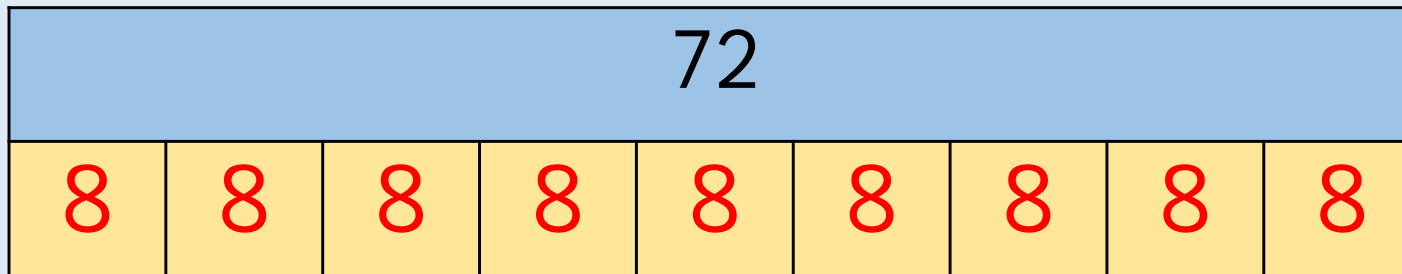
Complete the bar model.



Activity 2

The 8 Times Table

Complete the bar model.



Activity 3

The 8 Times Table

Complete the table.

x	2	4	8
3	6		
	10	20	
			72



Can you spot a pattern between the numbers?



Why is it helpful to partition the number you are multiplying by?

Activity 3

The 8 Times Table

Complete the table.

x	2	4	8
3	6	12	24
5	10	20	40
9	18	36	72

Why is it helpful to partition the number you are multiplying by?

Can you use concrete or pictorial representations to help you?

What other facts can you link to this one?

What other times tables will help you with this times table?