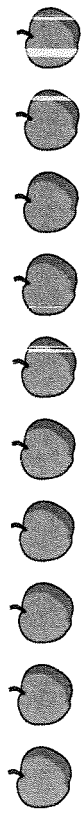


Make equal groups - grouping

1 Annie has 10 apples.



Annie has some plates.
She wants to put 2 apples on each plate.
Show how Annie groups the apples.

Complete the sentences.

There are apples.

There are apples on each plate.

There are plates.

2 Take 15 counters.



Put the counters into groups of 3

Complete the sentences.

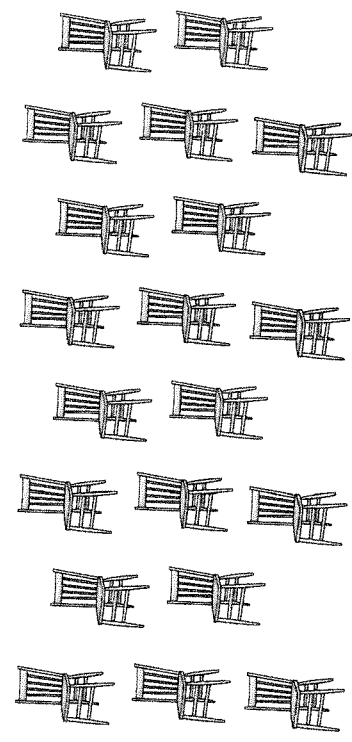
There are 15 counters.

The counters are in groups of

There are groups.

3 Mo has 20 chairs.

a) Circle groups of 5 chairs.



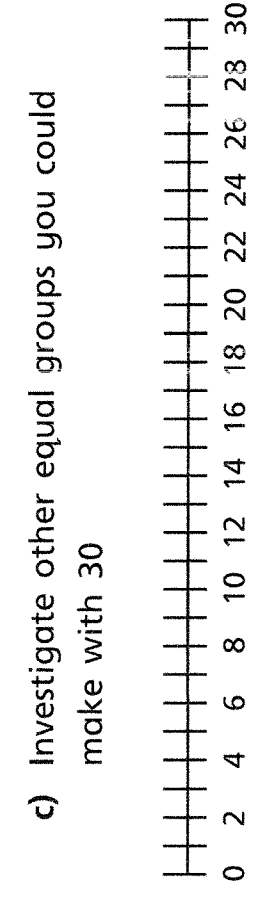
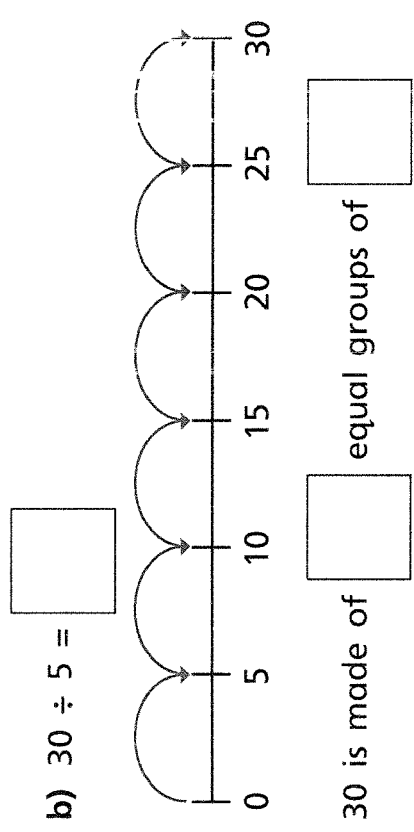
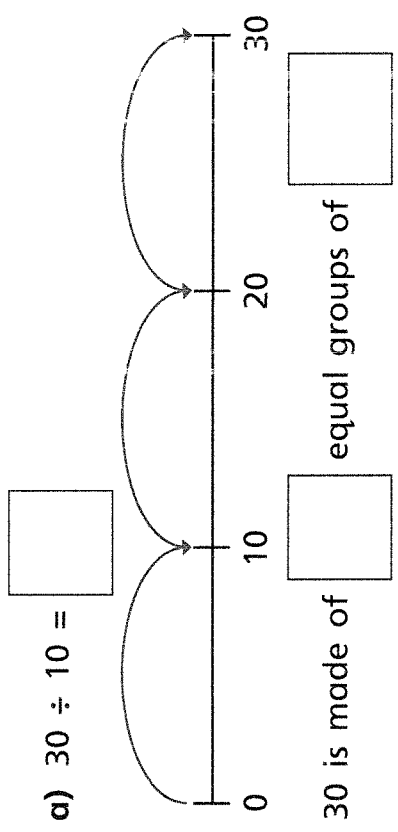
b) How many groups did you circle?

c) Complete the number sentence.

$$\boxed{} \div \boxed{} = \boxed{}$$

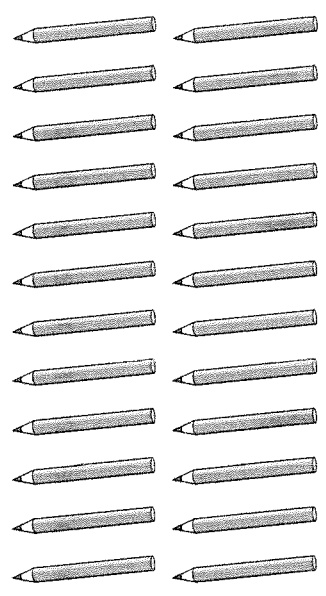


4 Complete the number sentences.
Use the number line to help you.



Talk about it with a partner.

5 Eva is putting 24 pencils into pots.



She puts 2 pencils into each pot.
How many pots does Eva need?

$\square \div \square = \square$

Eva needs $\square$ pots.

6

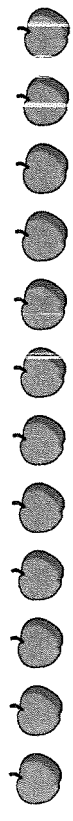
With 40 counters you can only make equal groups of 4 and 10

Is Ron correct? _____

Use counters to show how you know.

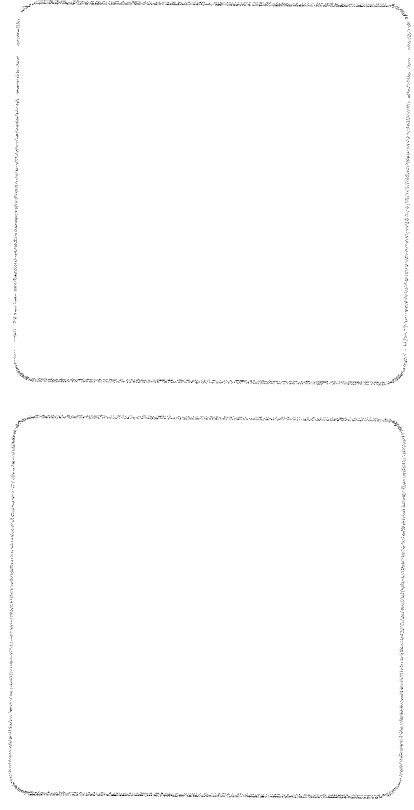
Make equal groups – sharing

1 Annie has 12 apples.



She shares them equally into 2 boxes.

Show how Annie shares the apples equally.



Complete the sentences.

There are 12 apples.

There are boxes.

There are apples in each box.

2 Take 20 cubes.

a) Share them into 2 equal groups.

Complete the sentences.

There are 20 cubes.

There are groups.

There are cubes in each group.

b) Share the cubes into 5 equal groups.

Complete the sentences.

There are 20 cubes.

There are groups.

There are cubes in each group.

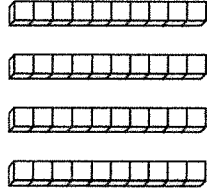
c) You can share 20 into other equal groups.

Is this true? _____

How do you know?

3 Complete the divisions.

Use base 10 to help you.



a) $40 \div 2 =$

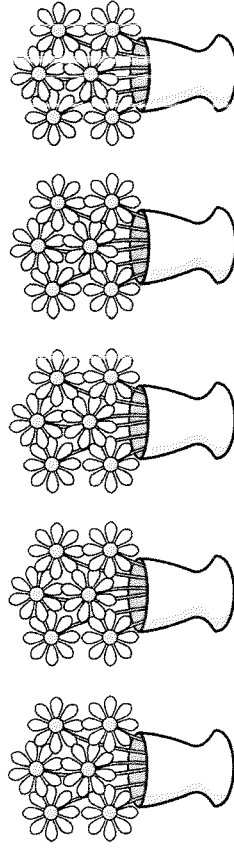
c) $40 \div 5 =$

b) $40 \div 4 =$

d) $40 \div 10 =$

Did you have to make any exchanges?

4 30 flowers are shared equally between 5 vases.



a) Complete the division.

$\div$ =

b) What does each part of the division represent?

Talk about it with a partner.

5 Complete the divisions.

A $20 \div 5 =$

C $20 \div$ $= 2$

B $20 \div 4 =$

D $20 \div 2 =$

Write a letter in each box to match the divisions to the sentences.

Dora has 20 apples. She shares them equally between 4 boxes.

Ron has 20 sweets. He shares them equally between some party bags. There are 2 sweets in each party bag.

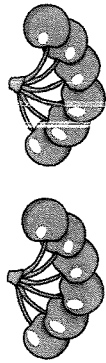
Dexter has 20 toy cars. He shares them equally between 5 boxes.

Whitney has 20 dolls. She shares them equally with her sister.

What other sentences can you think of to match the divisions?

1 Complete the sentences.

a)



There are 12 cherries.

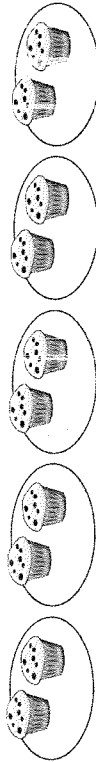
There are groups.

There are cherries in each group.

$$12 \div 2 =$$

$$2 \times \text{ } = 12$$

b)



There are 10 muffins.

There are muffins in each group.

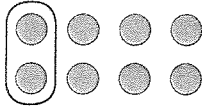
There are groups.

$$10 \div 2 =$$

$$\text{ } \times 2 = 10$$

2 Complete the number sentences for each array.

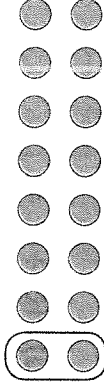
a)



$$\text{ } \times 2 = 8$$

$$8 \div 2 =$$

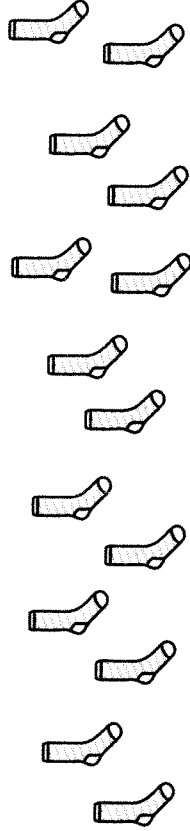
b)



$$\text{ } \times 2 = 16$$

$$16 \div 2 =$$

3 There are 14 socks.



Amir puts them in pairs.

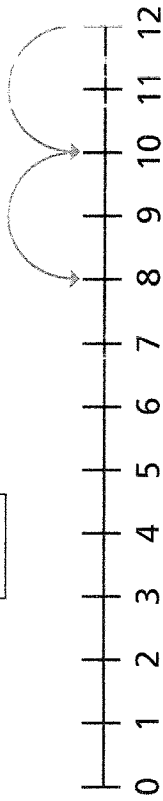
a) How many pairs of socks does he have?

b) Complete the number sentence.

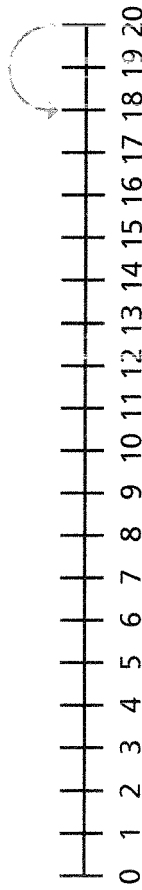
$$\text{ } \div \text{ } = \text{ }$$

- 4 Use the number lines to complete the division sentences.

a) $12 \div 2 =$



b) $20 \div 2 =$



Is there another way to work this out?

- 5 Alex has 22 pencils.

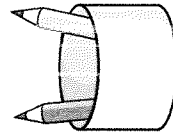
She puts them into pots.

Each pot has 2 pencils.

How many pots does Alex need?

$22 \div 2 =$

Alex needs pots.



If I know my

2 times-table, I can use this
to help me divide by 2



Do you agree with Dora? _____

Talk about it with a partner.

- 7 Complete the divisions.

a) $6 \div 2 =$

e) $\div 2 = 5$

b) $10 \div 2 =$

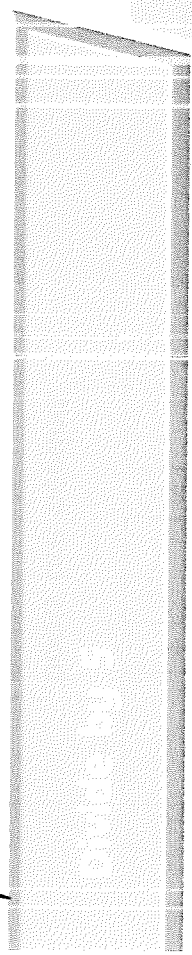
f) $\div 2 = 6$

c) $14 \div 2 =$

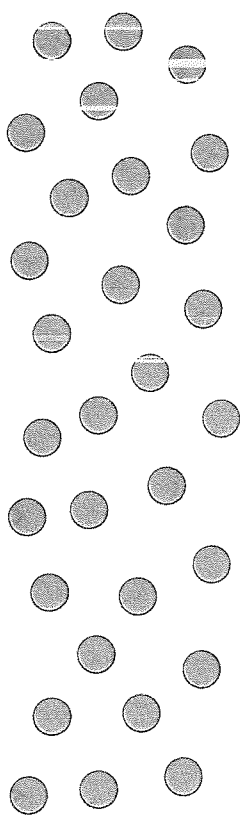
g) $\div 2 = 9$

d) $0 \div 2 =$

h) $\div 2 = 11$



1 Here are some counters.



a) Draw circles around groups of 5

b) Complete the sentences.

There are 30 counters.

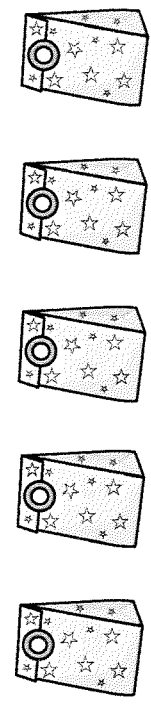
There are counters in each group.

There are groups.

$30 \div 5 =$

$\times 5 = 30$

2 Share the sweets between the party bags.



There are sweets.

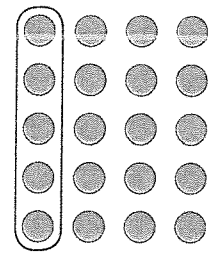
There are party bags.

There are sweets in each bag.

$15 \div$ $=$

3 Complete the number sentences for each array.

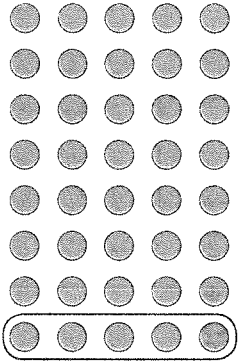
a)



$\times 5 = 20$

$20 \div 5 =$

b)



$\times 5 =$

$\div 5 =$

4

Draw an array to show that $10 \div 5 = 2$



5

A boat can fit 5 people.

Work out how many boats are needed for 45 people.

$\div$

$=$

boats are needed.



6

Complete the divisions.

a) $15 \div 5 =$

e)

$\div 5 = 7$

b) $25 \div 5 =$

f)

$\div 5 = 11$

c) $50 \div 5 =$

g)

$\div 5 = 8$

d) $60 \div 5 =$

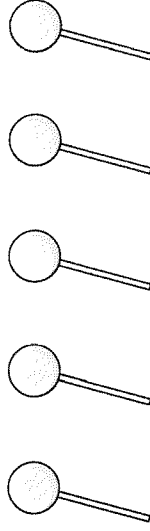
h)

$\div 5 = 0$



7

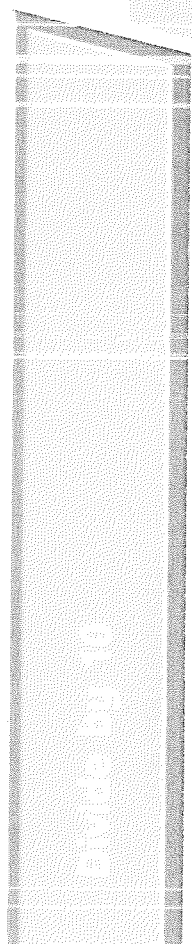
Annie buys 5 lollipops.



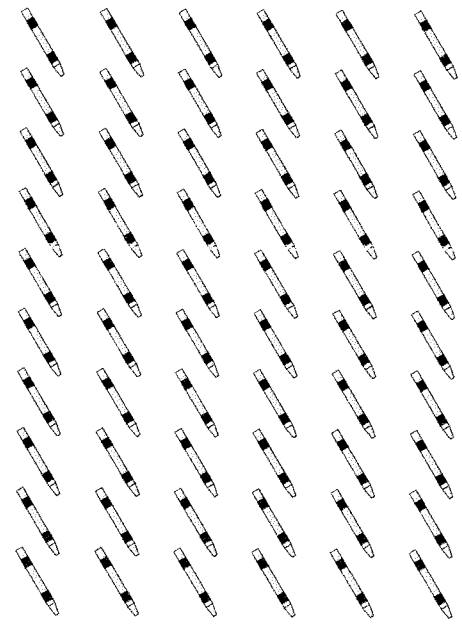
This costs her 50p.

How much do 2 lollipops cost?

p



1 Here are some crayons.



A pack holds 10 crayons.
How many packs can be made?
Complete the sentences.

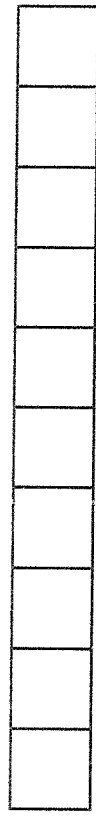
There are crayons.

There are crayons in a pack.

$60 \div 10 =$

packs can be made.

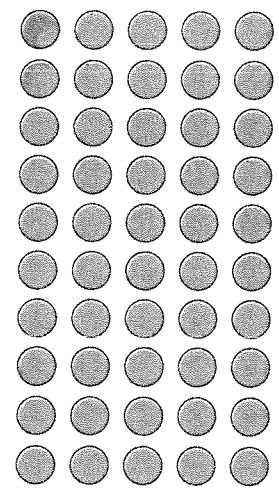
2 Share 40 counters equally between 10 groups.



Complete the division.

$40 \div$ $=$

3 Use the array to complete the fact family.



	$\times$		$=$	
	$\times$		$=$	
	$\div$		$=$	
	$\div$		$=$	

4 Write the missing numbers.

a) $70 \div 10 = \boxed{}$ d) $\boxed{} \text{ tens} \div 10 = 2$

b) $80 \div 10 = \boxed{}$ e) $\boxed{} \div 10 = 6$

c) $1 \text{ ten} \div 10 = \boxed{}$

5 Rosie has these number cards.

4	10	40
---	----	----

Complete the number sentences using only these numbers.

$\boxed{} \div \boxed{} = \boxed{}$	$\boxed{} \times \boxed{} = \boxed{}$
---	---

Are there any other ways to complete the sentences?

6 Tommy has 100 stickers for his sticker book.

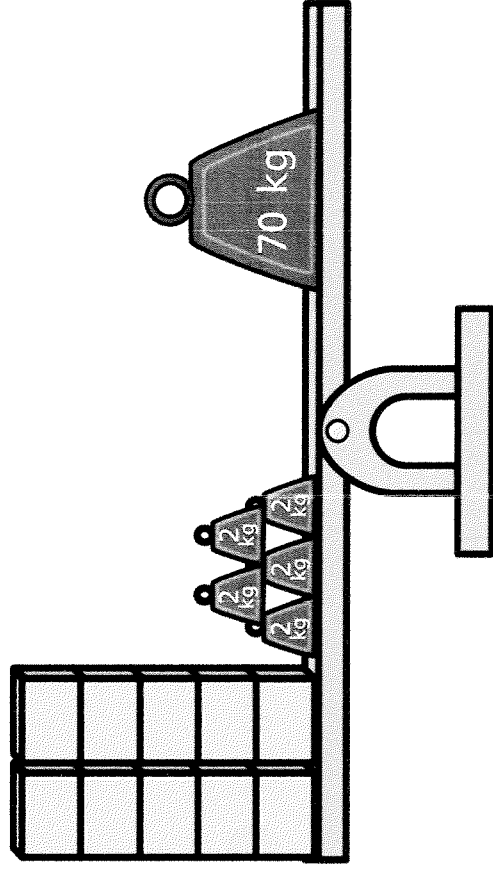
He can fit 10 stickers on each page.

How many pages can Tommy fill?

$\boxed{} \div \boxed{} = \boxed{}$

Tommy can fill $\boxed{}$ pages.

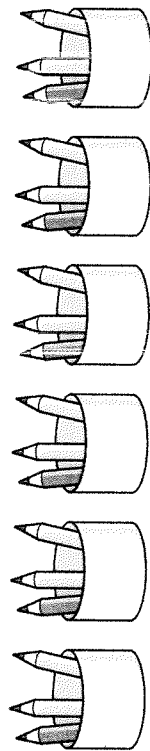
7 What is the mass of one of the boxes?



Multiplying by 3

Complete the sentences.

a)

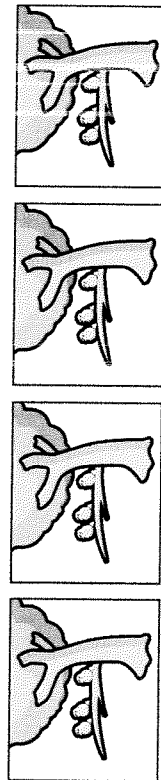


There are equal groups of

$$\boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} \times \boxed{} = \boxed{}$$

b)



There are equal groups of

$$\boxed{} = \boxed{} + \boxed{} + \boxed{} + \boxed{}$$

$$\boxed{} = \boxed{} \times \boxed{}$$

c)



There are equal groups of

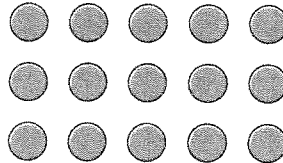
$$\boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{} + \boxed{} = \boxed{}$$

$$\boxed{} \times \boxed{} = \boxed{}$$

Could you write the number sentences in a different way?

Write two multiplication sentences for each part of the question.

a)



$$\boxed{} \times \boxed{} = \boxed{}$$

$$\boxed{} \times \boxed{} = \boxed{}$$

b)

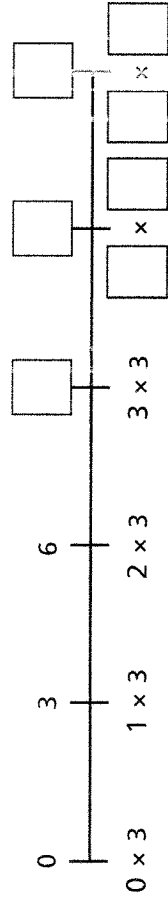
3	3	3	3	3	3	3	3	3	3
---	---	---	---	---	---	---	---	---	---

	x		=	
	x		=	

Complete the diagram.

Number story	Bar model
$6 \times 3 = 18$	
Addition sentence	Draw it

Complete the number line.



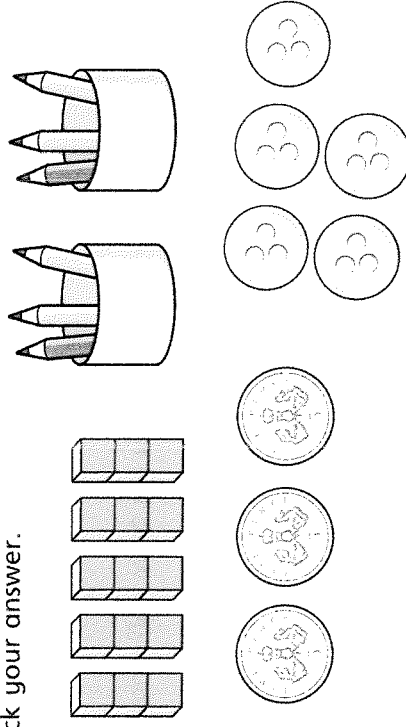
6 lots of 3
is 6 more than
5 lots of 3



Do you agree with Dora? _____
Explain why. _____

Which is the odd one out?

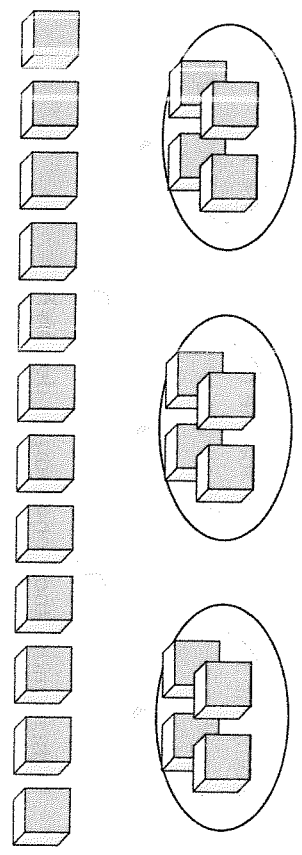
Tick your answer.



Explain your answer. _____

Is there more than one answer? _____

Divide by 3



Complete the sentences.

There are 12 cubes.

There are plates.

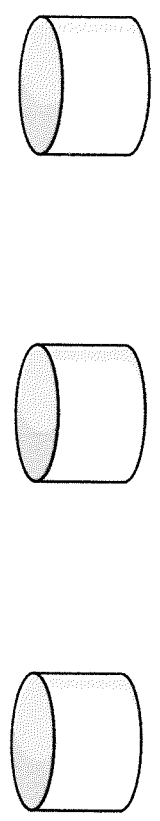
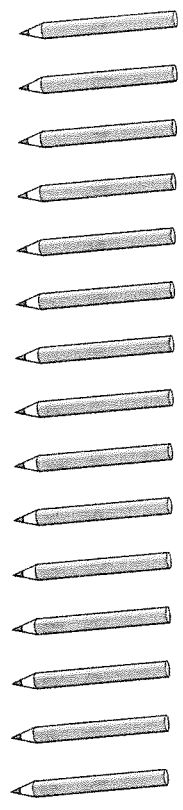
Each plate has cubes.

12 divided into equal groups is



Mo has 15 pencils.

He shares them equally into 3 pots.



How many pencils will there be in each pot?

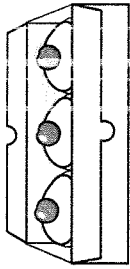
There will be pencils in each pot.



Divide 18 counters into groups of 3 counters.

Draw a picture to show what this would look like.

How many groups did you draw?

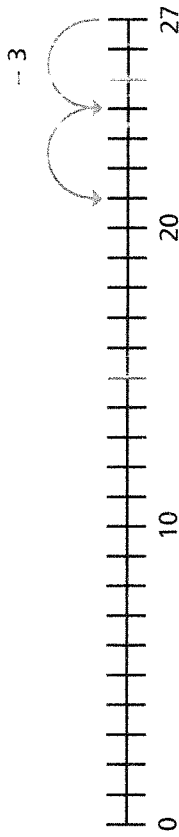


There are 27 cakes.

A box can hold 3 cakes.

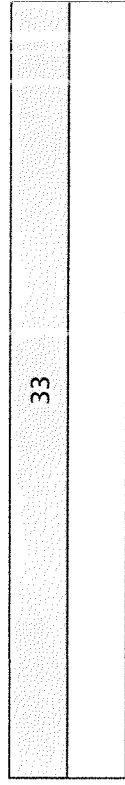
How many boxes of 3 cakes can be filled?

Use the number line to help you.



boxes of 3 cakes can be filled.

Complete the bar model for the division $33 \div 3 = 11$



Is there more than one way to do this?

Complete the division statements for each problem.

a) Esther has 21 balloons.

She puts them into 3 party bags.

How many balloons are in each party bag?

$$\boxed{} \div \boxed{} = \boxed{}$$

b) Nijah has 36 apples.

In each box there are 3 apples.

How many boxes are there?

$$\boxed{} \div \boxed{} = \boxed{}$$

c) 24 children stand in groups of 3

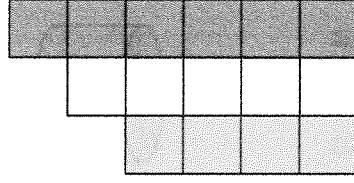
How many groups are there?

$$\boxed{} \div \boxed{} = \boxed{}$$

Numbers that follow each other when you count are called consecutive numbers.

Three consecutive numbers can form a staircase.

Here is 4, 5 and 6



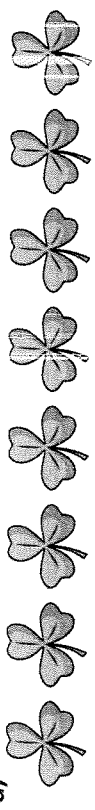
When you add three consecutive numbers, the total can always be divided equally by 3

Is this statement correct?

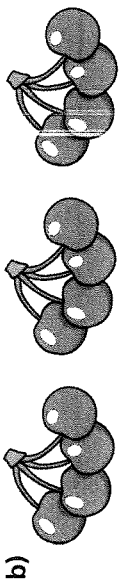
Talk about it with a partner.

The 3 times table

1 Complete the multiplications.

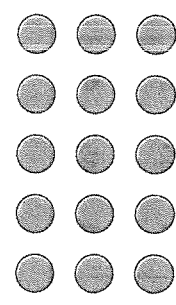
a)  $\square \times \square = \square$

$\square \times \square = \square$

b)  $\square \times \square = \square$

$\square \times \square = \square$

2 Dani makes an array using counters.



Write two multiplication and two division facts represented by the array.

$\square \times \square = \square$	$\square \times \square = \square$	$\square \div \square = \square$	$\square \div \square = \square$
------------------------------------	------------------------------------	----------------------------------	----------------------------------

3 Complete the number sentences.

a) $6 \times 3 = \square$ d) $\square \div 3 = 5$

b) $3 \times \square = 27$ e) $12 \times 3 = \square$

c) $\square \div 11 = 3$ f) $\square \times 3 = 0$

4 Complete the number sentences.

a) $2 \times 3 = \square$ b) $6 = 3 \times \square$

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

$8 \times 3 = \square$ $18 = 3 \times \square$

What patterns do you notice?

5 Write $<$, $>$ or $=$ to compare the statements.

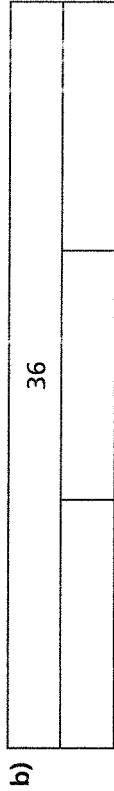
a) $33 \div 11$	$\bigcirc$ 3	d) 6×3	$\bigcirc$ $6 \div 3$
b) 27	$\bigcirc$ $30 \div 3$	e) 3×6	$\bigcirc$ $18 \div 3$
c) $9 \div 3$	$\bigcirc$ 3×6	f) 0×3	$\bigcirc$ $3 \div 3$

Colour all the numbers in the 3 times-table.

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 two patterns do you notice?

Work out the missing values in each bar model.



Mo has 7 packets of 3 stickers.

Eva has 3 packets of 9 stickers.

Who has the greatest number of stickers? _____

a) Complete the multiplications.

Are the answers odd or even? Tick your answer.

	odd	even
$1 \times 3 = 3$	☐	☐
$2 \times 3 = \square$	☐	☐
$3 \times 3 = \square$	☐	☐
$\square \times 3 = 12$	☐	☐

b) What would the next multiplication be?

$\square \times 3 = \square$

c) What do you notice about the products?

d) Will the product of 11×3 be odd or even? _____

Use the fact that $12 \times 3 = 36$ to work out the calculations.

$13 \times 3 = \square$

$3 \times 15 = \square$

$14 \times 3 = \square$

$24 \times 3 = \square$

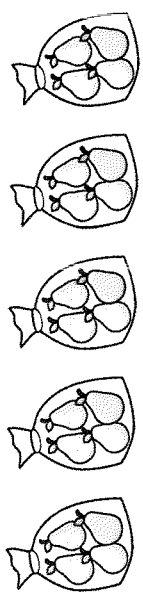
How did you work this out?

Did you find the answers in the same way as your partner? _____

Multiply by 4

Complete the sentences.

a)

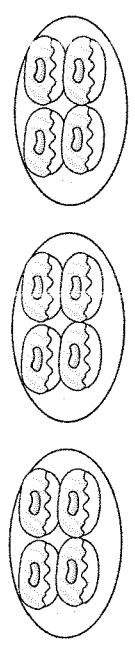


There are bags of pears.

There are pears in each bag.

There are pears in total.

b)

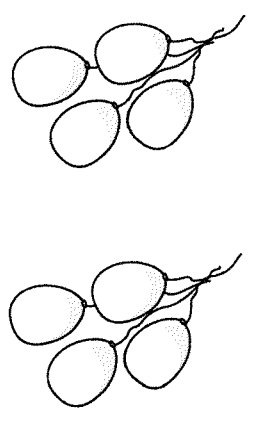


There are plates.

There are doughnuts on each plate.

There are doughnuts in total.

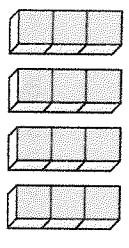
Complete the multiplication.



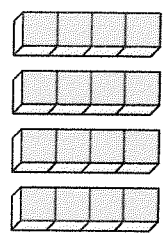
$$\square \times \square = \square$$

Match the representations to the number sentences.

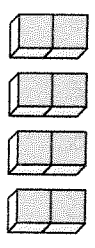
Complete the number sentences.



$$4 \times 2 = \square$$

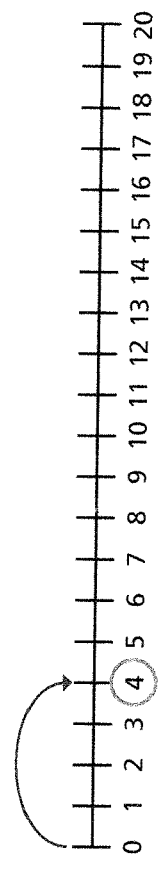


$$4 \times 3 = \square$$

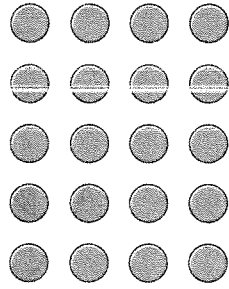


$$4 \times 4 = \square$$

Starting from zero, circle the numbers in the 4 times-table.
The first one has been done for you.



Esther makes this array.



What multiplication facts does the array represent?

Complete the multiplications.

$$\begin{array}{ccc} \square & \times & \square = \square \\ \square & \times & \square = \square \end{array}$$

Fill in the missing number.

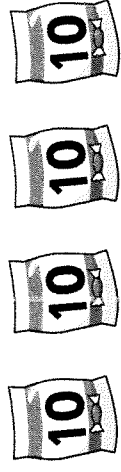
4	4	4	4	4	4	4	4

What multiplication is represented?

Complete the multiplication.

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

Teddy has 4 bags of 10 sweets.



How many sweets does Teddy have?

Teddy has sweets.

A bottle contains 4 litres of juice.

Mrs Wilson needs 30 litres of juice for a party.

She has 12 bottles.

Does she have enough juice?



To multiply by 4,
you take the number
you are multiplying and
double it twice.

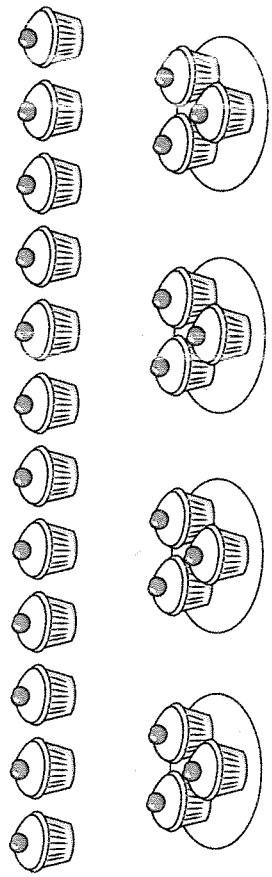


Do you agree with Ron? _____

Explain your answer.

Divide by 4

Here are 12 cakes.



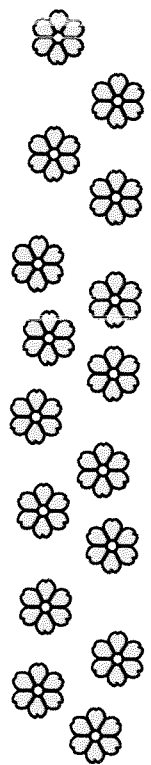
Complete the sentences.

There are plates.

Each plate has cakes.

12 shared into equal groups is

Circle groups of 4 flowers.

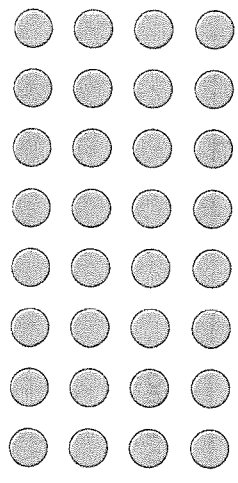


a) How many groups of 4 flowers did you make?

b) Complete the sentence.

There are groups of 4 in 16

Eva makes an array with 32 counters.



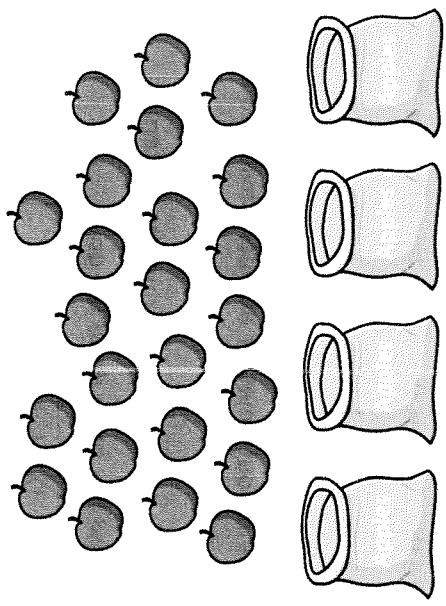
a) How many groups of 4 are in the array?

b) Use this to complete the division sentence.

$$32 \div 4 = \square$$

A farmer has 24 apples.

He wants to pack the apples equally into 4 bags.



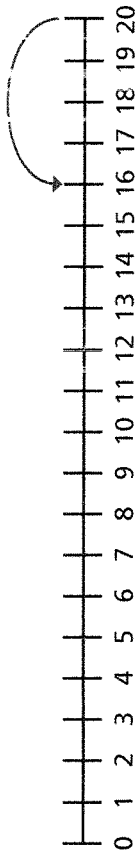
How many apples will be in each bag?

$$\square \div \square = \square$$

There will be apples in each bag.

- There are 20 muffins.
4 muffins fit in 1 box.

Use the number line to work out how many boxes can be filled.



boxes of muffins can be filled.

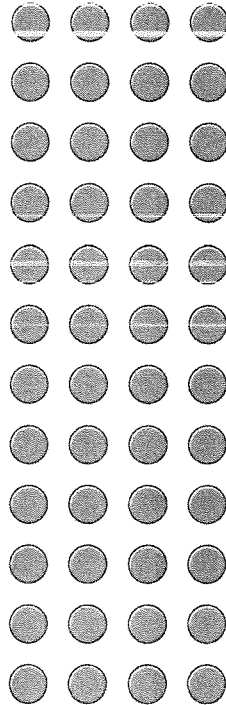
- Alex is trying to divide 48 by 4



To multiply
by 4, you can double
the number and
double again.

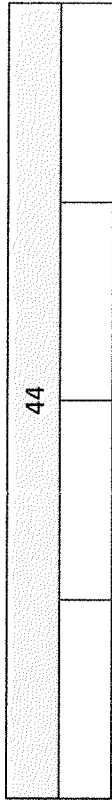
To divide a
number by 4, I think you
can halve the number and
halve it again.

Divide the array to show that Alex's method works.



Does Alex's method always work?

- Complete the bar model.



Complete the division statement to match the bar model.

$44 \div \boxed{} = \boxed{}$

- Mo is working out whether numbers divide equally by both 2 and 4

Complete the table and continue the pattern.

The first one has been done for you.

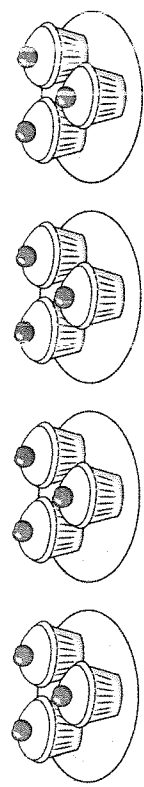
Number	Divided equally by 2 is . . .	Divided equally by 4 is . . .
2	1	does not divide equally
4		
6		
8		
10		
12		

What do you notice?

Equal groups

Complete the sentences to describe the groups.

a)

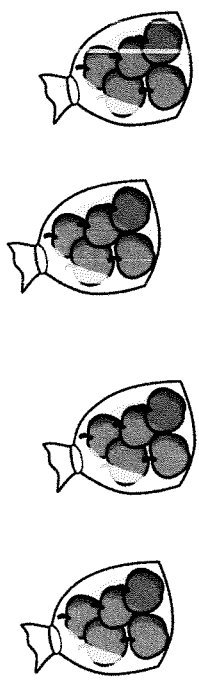


There are plates.

Each plate has cakes.

There are equal groups of .

b)



There are bags.

Each bag has apples.

There are equal groups of .

Kim has 6 equal groups of 5

a) Use cubes to represent this.

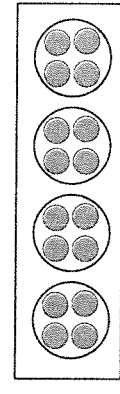
b) Draw your cubes.

What could the cubes represent?

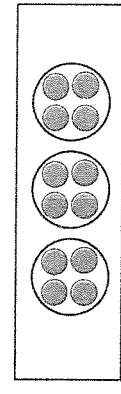
Talk about it with a partner.

Match the statements to the representations.

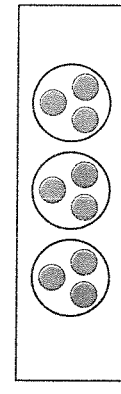
3 equal
groups of 4



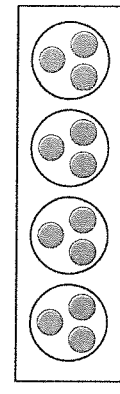
3 equal
groups of 3



4 equal
groups of 3



4 equal
groups of 4



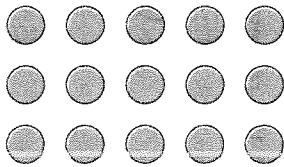


b) Circle 2 groups of 4

Do this in two different ways.



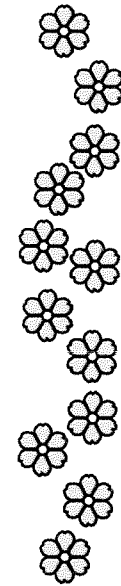
Filip has used counters to represent 5 equal groups of 3



a) Draw more counters to represent 5 equal groups of 4

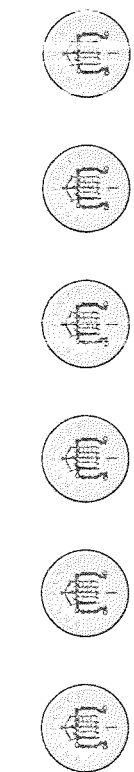
b) How many more counters did you draw?

c) What do you notice?



a) How many ways can you arrange the flowers into equal groups?

b) How do you know you have found all the ways?



Arrange the coins into 3 equal groups.

How many coins are there in each group?

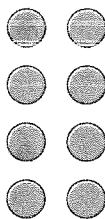


What would 5 equal groups of 0 look like?

Draw your answer.

What could the number story be?

Dani makes an array.



a) Circle 4 groups of 2

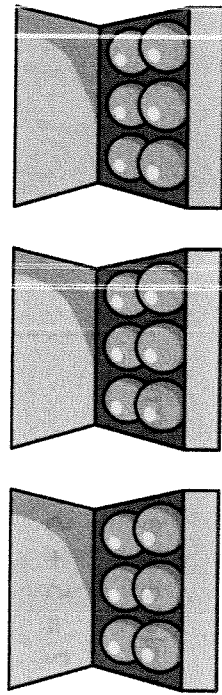
Do this in two different ways.



Multiplication sentences using the x symbol

1 Complete the sentences.

a)

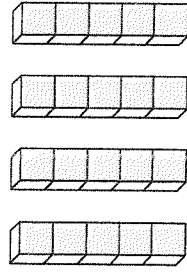


There are equal groups with

in each group.

$$\begin{array}{ccccc} \boxed{} & + & \boxed{} & = & 18 \\ \boxed{} & \times & \boxed{} & = & 18 \end{array}$$

b)

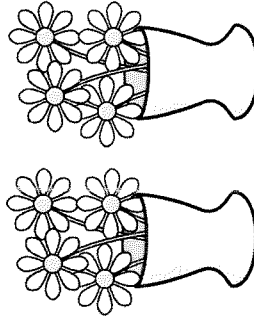


There are equal groups with

in each group.

$$\begin{array}{ccccc} \boxed{} & + & \boxed{} & + & \boxed{} = 20 \\ \boxed{} & \times & \boxed{} & = & 20 \end{array}$$

c)



There are equal groups with

in each group.

$$\begin{array}{ccccc} \boxed{} & + & \boxed{} & = & 8 \\ \boxed{} & \times & \boxed{} & = & 8 \end{array}$$

2 Complete the table.

The first one has been done for you.

Addition	Multiplication
$2 + 2 + 2 + 2$	4×2
$5 + 5 + 5$	
$3 + 3 + 3 + 3 + 3$	
	2×10

3 Complete the pattern.

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

$$5 \times 3 = 5 + 5 + 5 = \boxed{}$$

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

$$5 \times 5 = \underline{\hspace{2cm}} = \boxed{}$$

What comes next?

4 The total is 16

What could the addition and multiplication be?

5 Use counters to help you complete the number sentences.

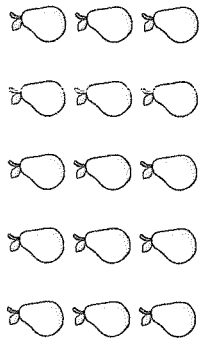
a) $3 \times \boxed{} = 12$

b) $\boxed{} \times 4 = 8$

c) $2 \times \boxed{} = 10$

Use arrays

1 How many pears are there?



	+		=	
	×		=	

There are pears.

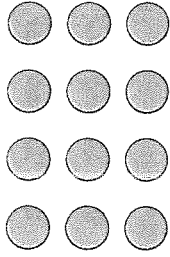
2 How many stars are there?



	+		=	
	×		=	

There are stars.

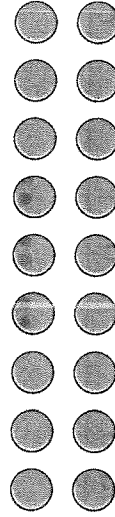
3 Write two additions and two multiplications for the array.



	+		=	
	×		=	
	+		=	
	×		=	

What do you notice?

4 Write two multiplications for this array.



	×		=	
	×		=	



5 Draw an array to show 7×3
Complete the number sentence.

$7 \times 3 =$



Is there more than one way to draw the array?

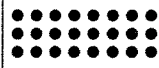


6 Draw three different arrays to show 12



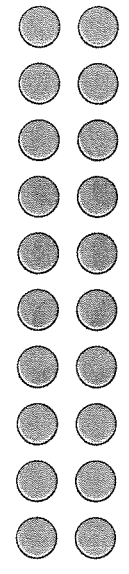
7 Draw dots to show each multiplication in two ways.

The first one has been done for you.

Multiplication	Array 1	Array 2
3×8		
2×5		
4×9		
6×1		



8 Can you see the multiplications 5×4 and 4×5 in the array?



Talk about it with a partner.

The 2 times-table

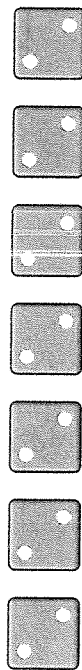
1 Write a fact from the 2 times-table to match the picture.

a)



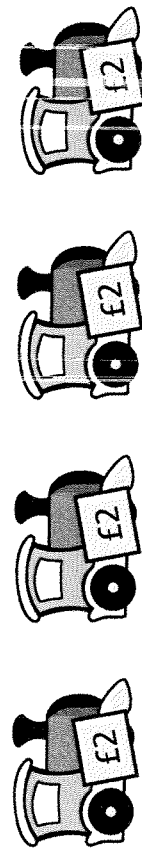
$$\square \times \square = \square$$

b)



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

c)



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

2 a) Complete the number line.



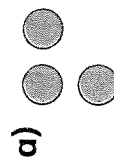
b) Which times-table does the number line show?

Tick your answer.

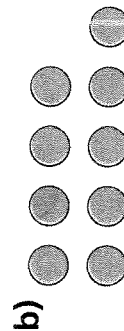
1 times-table 2 times-table
3 times-table

How do you know?

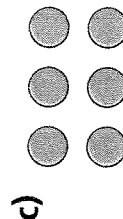
3 Complete the array and times-table fact so that they match.



$$2 \times 2 = \square$$



$$2 \times 5 = \square$$



$$2 \times \square = 8$$

4 Complete the number sentences.

a) $3 \times 2 = \boxed{}$ f) $\boxed{} = 12 \times 2$

b) $\boxed{} = 9 \times 2$ g) $2 \times \boxed{} = 2$

c) $2 \times 5 = \boxed{}$ h) $2 \times 0 = \boxed{}$

d) $2 \times \boxed{} = 4$ i) $14 = 2 \times \boxed{}$

e) $12 = \boxed{} \times 2$ j) $\boxed{} \times 2 = 22$

5 Teddy has £8

Rosie has twice as much money as Teddy.

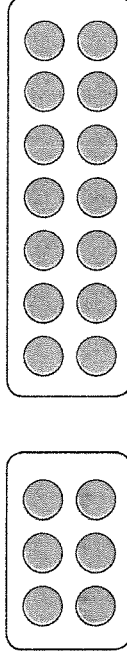
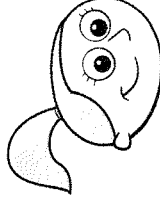
How much money does Rosie have?

Rosie has £ $\boxed{}$



6 Eva is writing 10×2 in different ways.

I can write
 10×2 as $3 \times 2 + 7 \times 2$



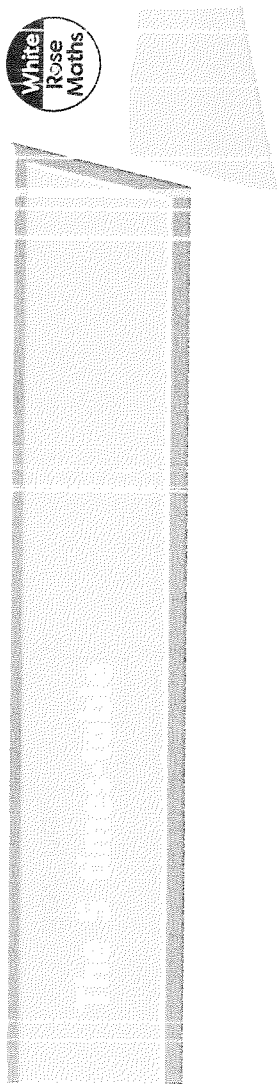
Find three more ways that you can write
 10×2

Use counters to help you.

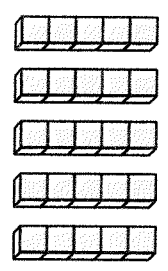
$\boxed{} \times \boxed{}$	$\boxed{} + \boxed{}$	$\boxed{} \times \boxed{}$
$\boxed{} \times \boxed{}$	$\boxed{} + \boxed{}$	$\boxed{} \times \boxed{}$
$\boxed{} \times \boxed{}$	$\boxed{} + \boxed{}$	$\boxed{} \times \boxed{}$

Compare answers with a partner.

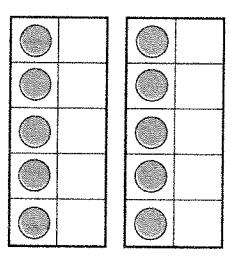




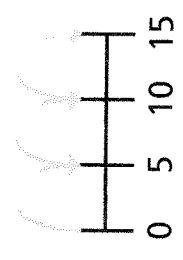
1 a) Match the picture to the times-table fact.



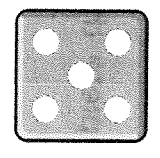
3×5



2×5



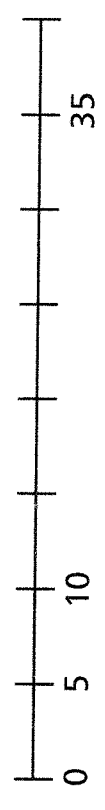
1×5



5×5

b) Draw a picture to show 4×5

2 a) Complete the number line.



b) Which times-table does the number line show?
Tick your answer.

1 times-table 2 times-table

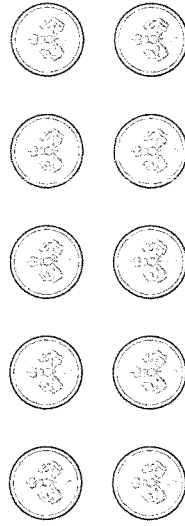
5 times-table

How do you know?

3 Complete the number sentences.

- a) $5 \times 5 =$ f) $= 11 \times 5$
- b) $= 9 \times 5$ g) $5 \times$ $= 5$
- c) $5 \times 6 =$ h) $5 \times 0 =$
- d) $5 \times$ $= 40$ i) $10 = 5 \times$
- e) $35 =$ $\times 5$ j) $\times 5 = 60$

4 How much money does Ron have?



Complete the multiplication.

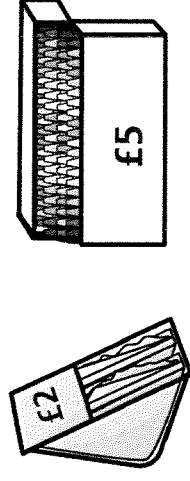
$\times$ $=$

Ron has p.

5 Write $<$, $>$ or $=$ to compare the calculations.

- 7×5 5×8
- 6×5 $4 \times 5 + 2 \times 5$
- 2×5 $3 \times 5 - 1 \times 5$
- 12×2 2×12

6 A sandwich costs £2 and a box of crayons costs £5



Jack buys 5 sandwiches and 3 boxes of crayons.
How much does he spend in total?

Jack spends £