

GRADE 3
FLORIDA

Division

WORKSHEETS

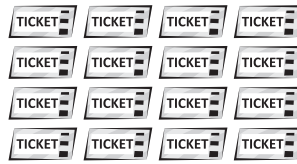
Mathletics

love learning.

Division – sharing (partition)

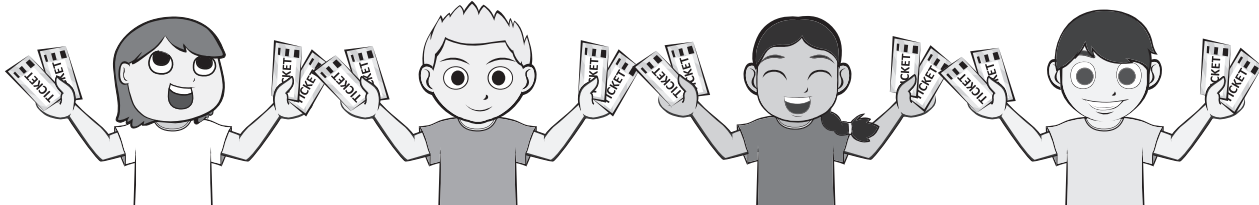
When we share things into groups evenly, every group is the same or **equal**. We call this process **division**.

Here are **16** carnival ride tickets.

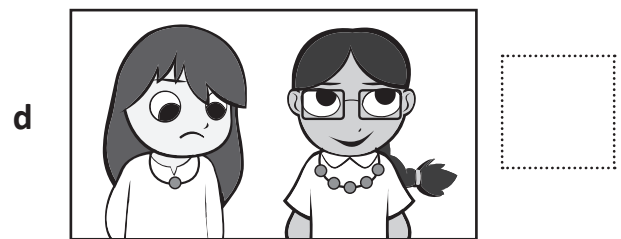
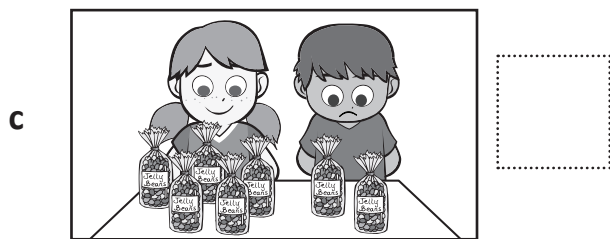
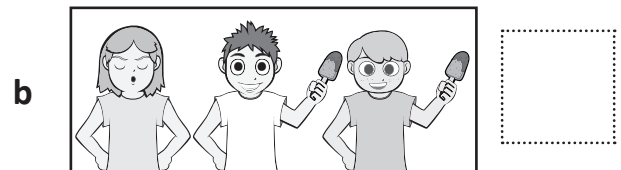
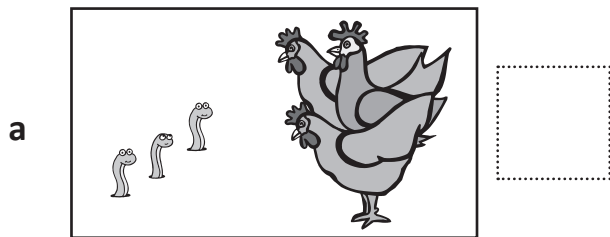


We want to share them among **4** children.

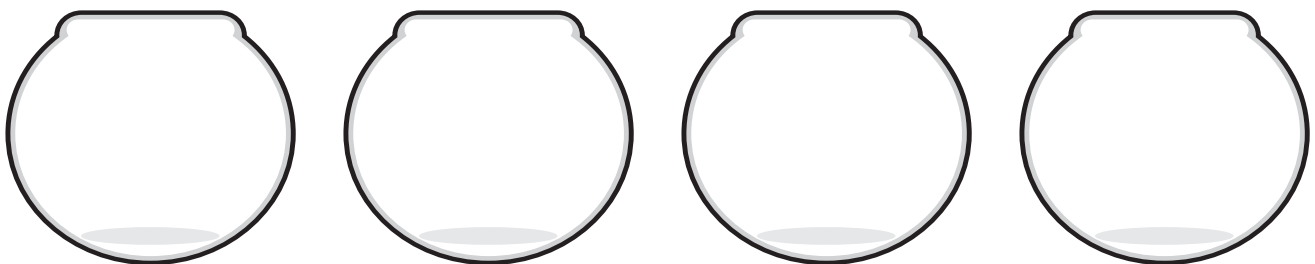
If we share the tickets evenly, every child gets 4 tickets. Yay!



1 Look at these shares. Are they equal? the equal shares and the ones that are not equal.



2 Draw 16 fish, sharing them between the 4 bowls. Make sure each bowl has the same number of fish.



Division – grouping

Sometimes we know how many things we want in a group but we don't know how many groups we can make. Look at this problem.

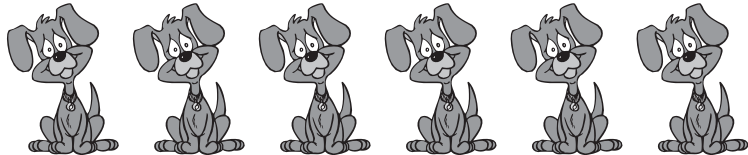
Each dog needs 2 milk bones for lunch. How many dogs can we feed using 12 bones?

To find out, we share out the bones into groups of 2.



There are 6 groups.

6 lucky dogs are getting yummy milk bones for lunch!



1 Work out how many animals you can feed. Use counters or draw pictures to help you solve the problems.

a Each bird needs 3 worms. You have 18 worms. How many birds can you feed?



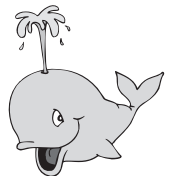
b Each bear needs 6 fish. You have 24 fish. How many bears can you feed?



c Each monkey needs 5 bananas. You have 25 bananas. How many monkeys can you feed?



d Each whale needs 10 buckets of plankton. You have 40 buckets. How many whales can you feed?



Division – grouping

You will need:  48 counters

What to do:

You and 3 friends have won a prize from the local bakery. There are 48 delicious mini cupcakes available to be shared among the group.

Would you get more if they said,

“Share these cupcakes evenly among you.”

OR

“Each winner can have 6 cupcakes.”

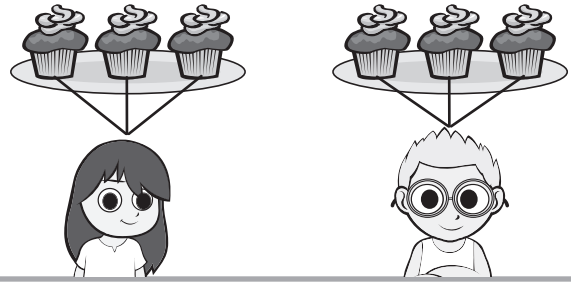
Show your work below.



Division – sharing and grouping

Division is when we make equal shares.

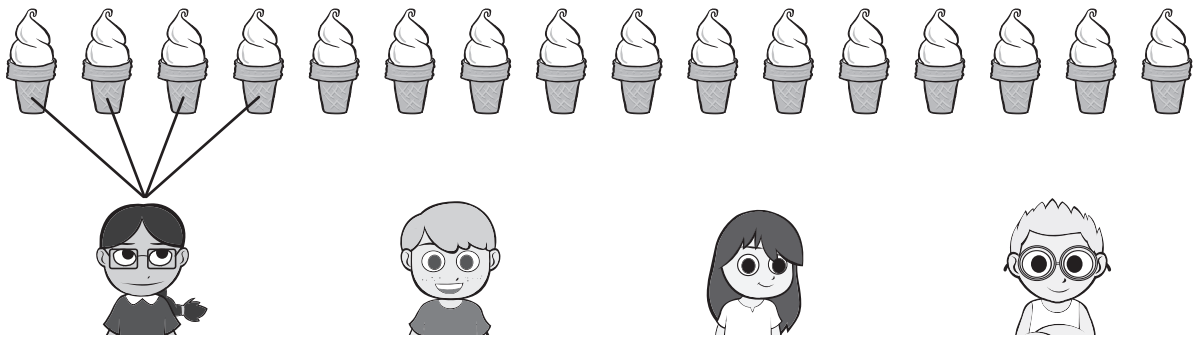
If we share these 6 cakes equally between 2 kids, they each get 3 cakes.



1 Share the items equally in each picture by drawing lines to connect them. Write how many are in each share.

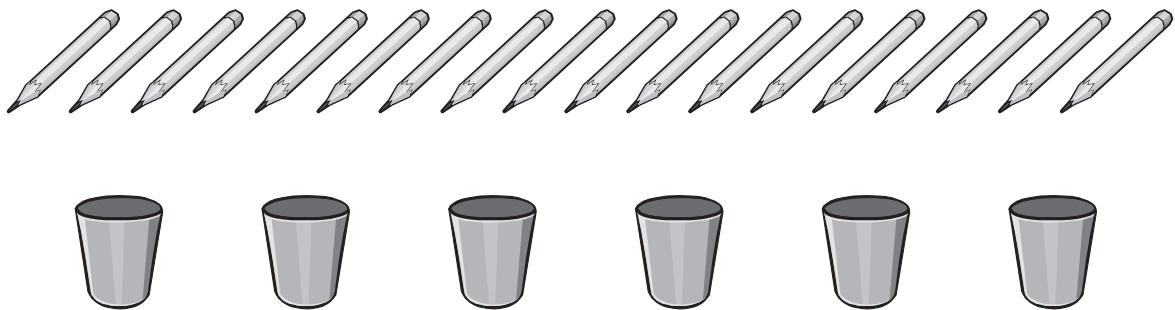
a Share these 16 ice creams among 4 kids.

4 equal shares = _____ each



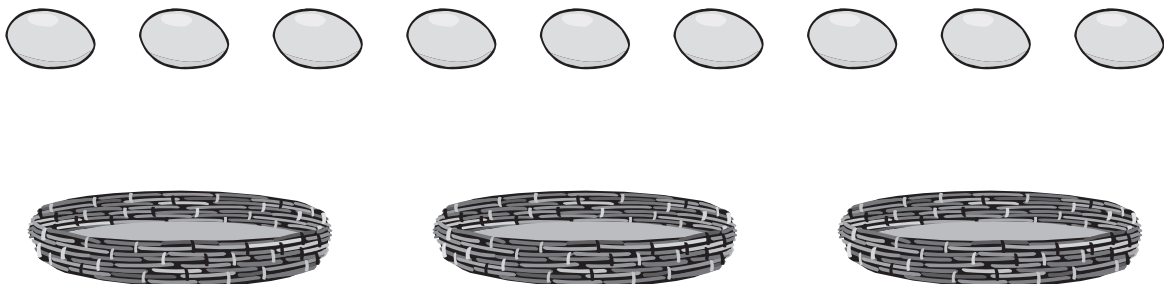
b Share these 18 pencils between 6 cups.

6 equal shares = _____ each



c Share these 9 eggs between 3 baskets.

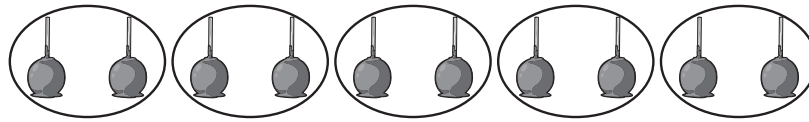
3 equal shares = _____ each



Division – sharing and grouping

Division is also when we make equal groups.

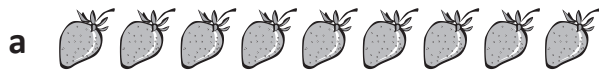
Here are 10 candy apples. How many bags do we need if we put 2 in each bag?



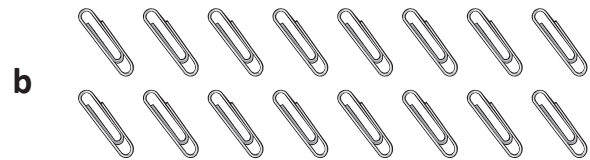
If we circle 2 candy apples in each group, we can make 5 groups. So, we need 5 bags.



2 Circle equal groups in each picture and write how many are in each share:



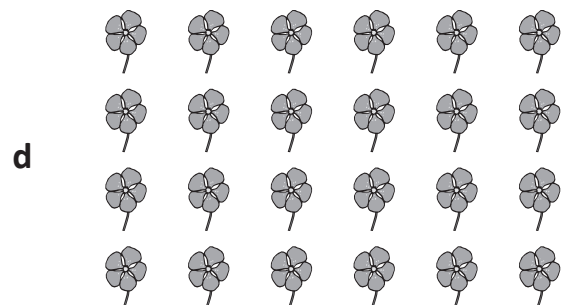
Out of 9 strawberries, how many groups are there if there are 3 in each group?



Out of 16 paper clips, how many groups are there if there are 4 in each group?



Out of 36 fish, how many groups are there if there are 6 in each group?



Out of 24 flowers, how many groups are there if there are 4 in each group?

3 Draw a picture to show 7 groups with 5 in each share.

How many in total?

Division – the division (\div) symbol

This is a division symbol \div

So instead of saying “Share 12 tennis balls fairly between 2 tennis players. How many balls do they each get?” we can write:

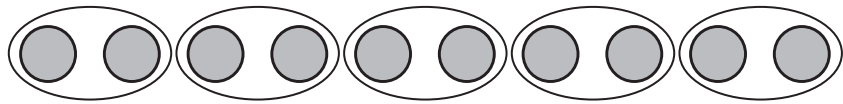
$$12 \div 2 = 6$$

This says 12 divided by 2 is 6. It means that there are 2 groups of 6.

1 Write the division facts using the division symbol for each picture:

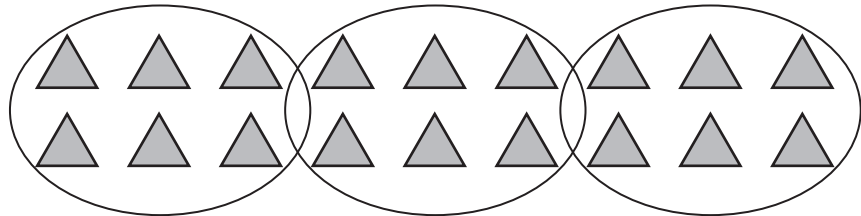
a 10 divided by 5

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



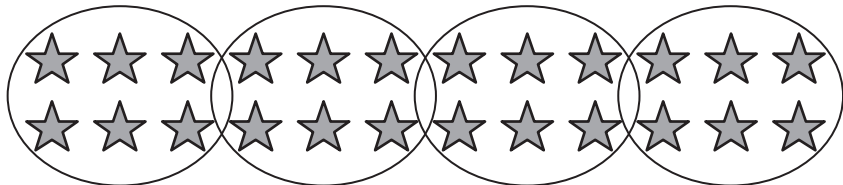
b 18 divided by 3

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



c 24 divided by 4

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



2 Solve each of these division problems:

a Share 15 candies between 3 bowls.
How many candies are in each bowl?

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

b Share 20 oranges between 5 baskets.
How many are in each basket?

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

c Out of a pile of 36 colored pencils, 6 go into each cup.
How many cups are needed?

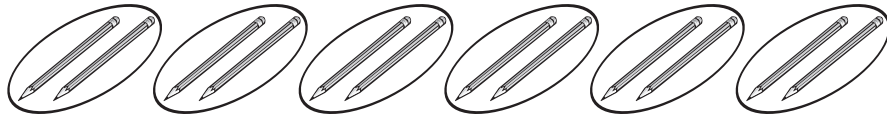
$$\square \div \square = \square$$

Division – the division (\div) symbol

+ means add, – means subtract, \times means multiply.

What is the sign for division or sharing? \div

12 pencils are shared
among 6 people.

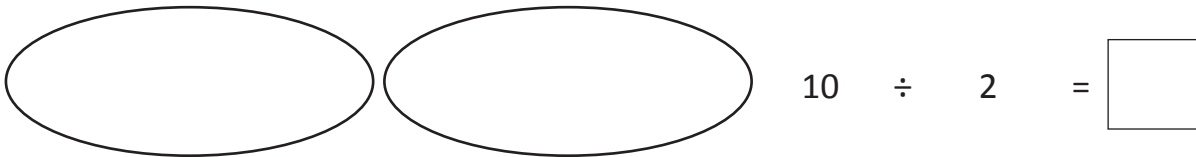


Each person gets 2 pencils.

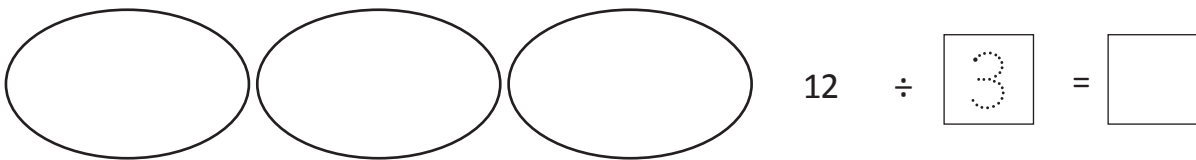
As a number fact, we write this as $12 \div 6 = 2$

3 Use tally marks or draw pictures to help you solve these problems. Finish the matching number facts.

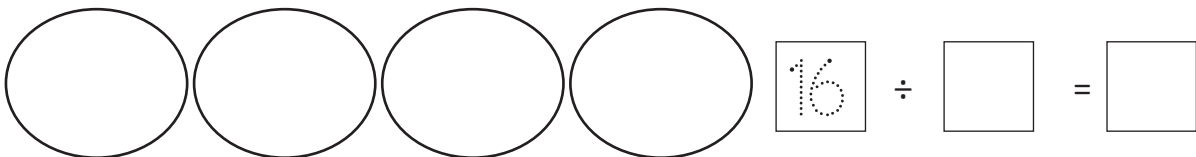
a 10 apples shared between 2 people is .



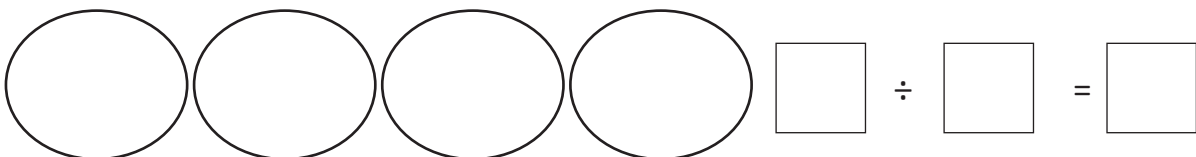
b 12 bananas shared among 3 monkeys is .



c 16 berries shared among 4 birds is .



d 28 fish shared among 4 seals is .



Division – the division (\div) symbol

4 Use tally marks or draw pictures to help you solve these problems. Finish the matching number facts.

- a There are 16 sparklers to be shared among 8 children. How many sparklers does each child get?

$$\boxed{16} \div \boxed{8} = \boxed{}$$

- b The hospital has 18 blankets to donate to some babies. To make sure they stay toasty warm, each baby needs 2 blankets. How many babies will get blankets?

$$\boxed{} \div \boxed{2} = \boxed{}$$

- c For a math activity, every child needs 5 stickers. The teacher has 25 stickers. How many children can do the math activity?

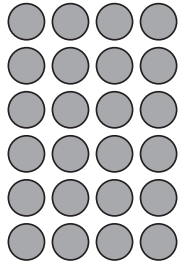
$$\boxed{} \div \boxed{} = \boxed{}$$

- d Farmer Jess has 36 carrots. She wants to plant them in rows of 9. How many rows can she plant?

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

Division – linking multiplication and division facts

Knowing multiplication facts will help with division facts.



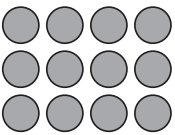
$$6 \times 4 = 24$$

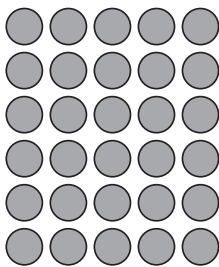
6 rows of 4 is 24.

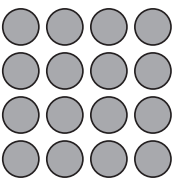
$$24 \div 4 = 6$$

24 divided into 4 shares is 6.

1 Describe each of these arrays using one multiplication and one division fact:

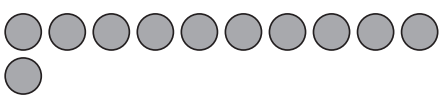
a  $\times 4 = 12$
 $12 \div 4 =$

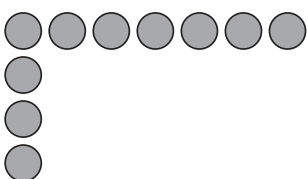
b  $\times 5 = 30$
 $30 \div 5 =$

c  $\times 4 = 16$
 $16 \div 4 =$

2 This time, you are given part of the array. Complete the array and then write one multiplication and one division fact that matches:

a  \times =
 \div =

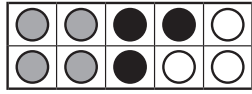
b  \times =
 \div =

c  \times =
 \div =

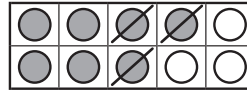
Division – relating multiplication and division

We know that addition and subtraction can do and undo each other.

$$4 + 3 = 7$$



$$7 - 3 = 4$$



Multiplication and division can also do and undo each other. Let's explore this.

You will need:  counters

What to do:

Make 3 groups of 4 counters.

How many counters altogether?

Let's write this as a multiplication fact.

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

Now put all those counters in 1 group.
Divide the same counters into 3 groups.
How many counters are in each group?

Let's write this as a division fact.

$$\boxed{12} \div \boxed{3} = \boxed{}$$

What to do next:

Make 4 groups of 5 counters.

Write this as a multiplication fact.

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

What do you think the matching division fact will be? Write your prediction here.

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

Now divide the counters into 4 groups.
Write the division number fact.

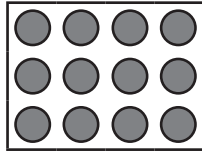
$$\boxed{} \div \boxed{} = \boxed{}$$

Were you correct? If not, can you see where you got mixed up?

Division – relating multiplication and division

We can use the same arrays to make multiplication and division facts. This array shows:

3 rows of 4 is 12



12 counters divided into 3 rows is 4

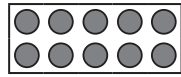
$$3 \times 4 = 12$$

AND

$$12 \div 3 = 4$$

1 Use the arrays to finish the number statements and facts.

a 2 rows of 5 is

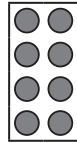


10 divided into 2 rows is

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

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

b 4 rows of 2 is



divided into rows is

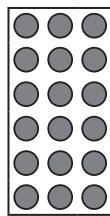
$$\square \times \square = \square$$

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

c

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

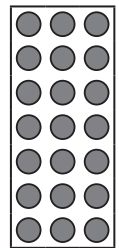
$$\square \div \square = \square$$



d

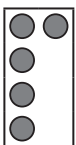
$$\square \times \square = \square$$

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



2 Now you can only see part of the arrays. Can you still finish the facts?

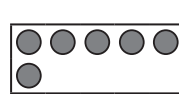
a



$$4 \times \square = \square$$

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

b



$$\square \times 5 = \square$$

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

Division – relating multiplication and division

We can use known multiplication facts to help us solve division problems.
Number patterns can also help us.

$$10 \div 2 = \boxed{?}$$

We know that $5 \times 2 = 10$ so $10 \div 2 = 5$

3 Use known multiplication facts (or counters) to help you finish these division facts.

a $1 \times 2 = \boxed{}$

$$\boxed{} \div 1 = \boxed{}$$

b $2 \times 2 = \boxed{}$

$$\boxed{} \div 2 = \boxed{}$$

c $4 \times 2 = \boxed{}$

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

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

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

4 Now use your understanding of number patterns to finish these.

a $10 \times 2 = \boxed{}$

$$\boxed{20} \div 10 = \boxed{}$$

b $20 \times 2 = \boxed{}$

$$\boxed{} \div 20 = \boxed{}$$

c $40 \times 2 = \boxed{}$

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

d $50 \times 2 = \boxed{}$

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

Division – relating multiplication and division

5 Can you finish these facts?

a $1 \times 10 = \square$

$\square \div 1 = \square$

b $2 \times 10 = \square$

$\square \div 2 = \square$

c $3 \times 10 = \square$

$\square \div 3 = \square$

d $4 \times 10 = \square$

$\square \div 4 = \square$

e $5 \times 10 = \square$

$\square \div \square = \square$

f $10 \times 10 = \square$

$\square \div \square = \square$

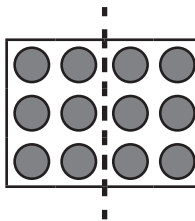
6 Now give yourself a pat on the back for being so smart and take a break. Draw a picture.

Division – relating division and fractions

When we divide something in half, we are sharing it into **2 equal parts**.

$\frac{1}{2}$ of 12 is 6

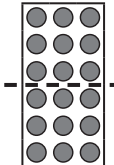
$12 \div 2 = 6$



1 Draw lines to divide these arrays into halves. Finish the facts.

a $\frac{1}{2}$ of 8 is 

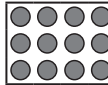
\div =

b $\frac{1}{2}$ of 18 is 

\div =

c $\frac{1}{2}$ of 10 is 

\div =

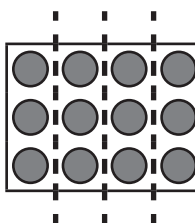
d $\frac{1}{2}$ of 12 is 

\div =

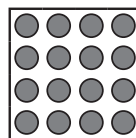
When we divide something into quarters, we are sharing it into **4 equal parts**.

$\frac{1}{4}$ of 12 is 3

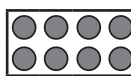
$12 \div 4 = 3$



2 Draw lines to divide these arrays into quarters. Finish the facts.

a $\frac{1}{4}$ of 16 is 

\div =

b $\frac{1}{4}$ of 8 is 

\div =