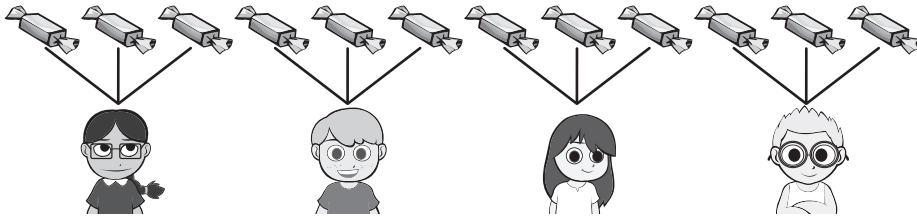


# Division – division is sharing and grouping

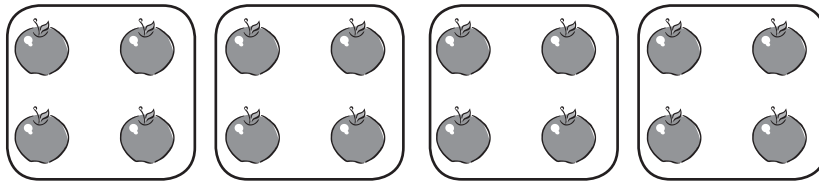
Division can mean sharing *or* grouping.

There are 12 lollies shared between 4 kids. How many are **in** each share?



$$12 \div 4 = 3$$

There are 16 apples and 4 go into each basket. How many baskets do I need?



$$16 \div 4 = 4$$

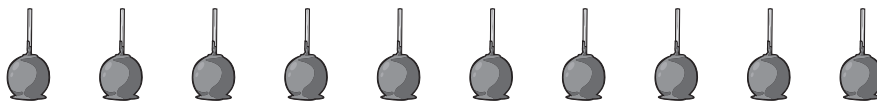
## 1 Solve these sharing and grouping questions:

a There are 9 cupcakes and 3 kids are sharing. How many are in each share?



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

b 10 lollies are shared between a group of kids so they each get 2. How many kids are sharing?



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

c There are 24 pencils and 6 pencil pots. How many pencils go into each pencil pot?



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

# Division – division is sharing and grouping

- 2 Draw pictures to show these division questions. Then write the division fact and decide whether it is a sharing or a grouping question.

If you need to find out how many items there are in each share, it's a sharing question. If you need to find out the number of equal shares, it's a grouping question.



**CHECK**

- a Divide 16 lollies between 4 girls. How many does each girl get?

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

sharing / grouping

- b From a packet of 24 pencils, each person will get 6. How many people are sharing the pencils?

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

sharing / grouping

- c 48 eggs are laid by 6 hens. If they all laid the same amount, how many did each hen lay?

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

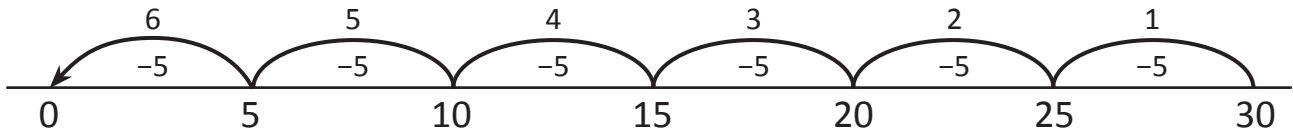
sharing / grouping

# Division – division is repeated subtraction

Division can also be thought of as repeated subtraction.

Look at  $30 \div 5 = \square$  This question is asking how many groups of 5 there are in 30.

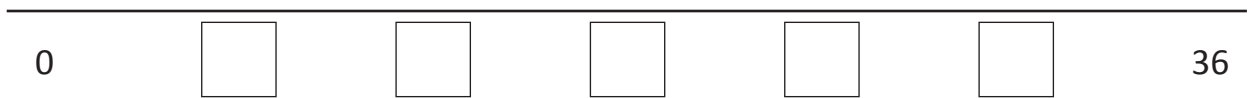
Jump in 5s along the number line and then count the jumps.



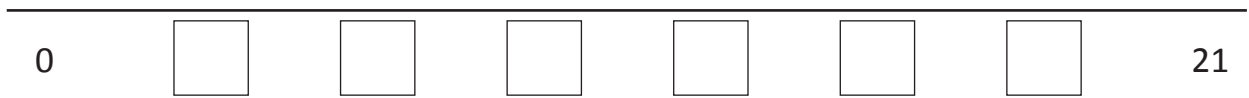
So,  $30 \div 5 = 6$

**1** Show these division facts as repeated subtraction. First label the number lines and then show the jumps.

a  $36 \div 6 = \square$

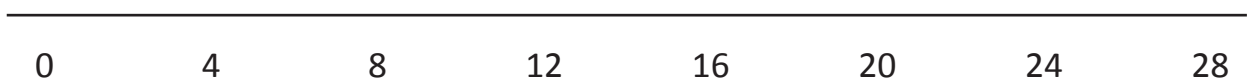


b  $21 \div 3 = \square$

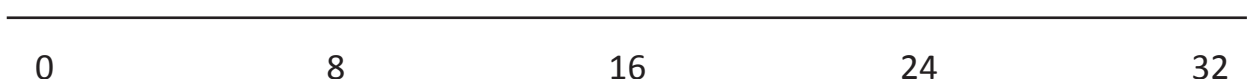


**2** Write a division fact to match these number lines. Show the jumps.

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

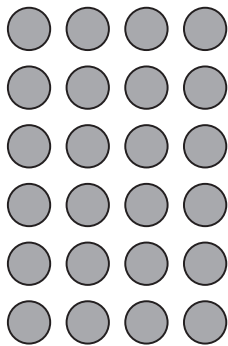


b  $\square \div \square = \square$



# Division – linking multiplication and division facts

Knowing multiplication facts will help with division facts. This is because they are opposites. Look at how we can describe this array:



$6 \times 4 = 24$

6 groups of 4 is 24.

$4 \times 6 = 24$

4 groups of 6 is 24.

$24 \div 4 = 6$

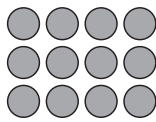
24 divided into 4 shares is 6.

$24 \div 6 = 4$

24 divided into 6 shares is 4.

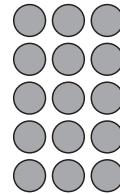
## 1 Describe each of these arrays using two multiplication and two division facts:

a



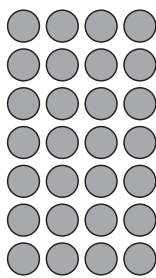
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

b



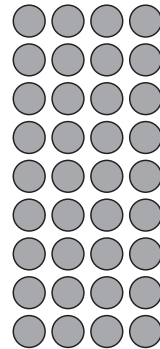
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

c



<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

d



<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

## 2 Draw an array of 6 rows of 3 then describe it with multiplication and division facts.

<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	×	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>
<input type="text"/>	÷	<input type="text"/>	=	<input type="text"/>

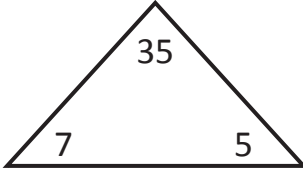
This is also called a fact family. ✨

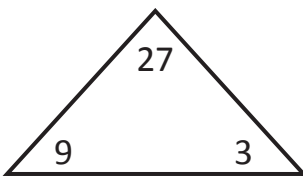


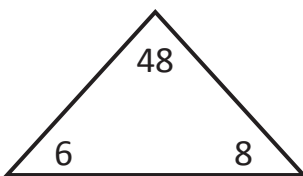
**REMEMBER**

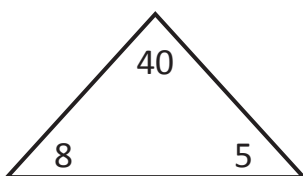
# Division – linking multiplication and division facts

3 Write a fact family for each set of numbers in the triangle. The first one has been done for you.

a  $\boxed{5} \times \boxed{7} = \boxed{35}$    $\boxed{35} \div \boxed{5} = \boxed{7}$   
 $\boxed{7} \times \boxed{5} = \boxed{35}$   $\boxed{35} \div \boxed{7} = \boxed{5}$

b  $\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$    $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$   
 $\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$   $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$

c  $\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$    $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$   
 $\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$   $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$

d  $\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$    $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$   
 $\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$   $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$

4 For these problems, think of a multiplication fact to help write the division fact:

a \$25 is shared between 5 people. How much does each person get?

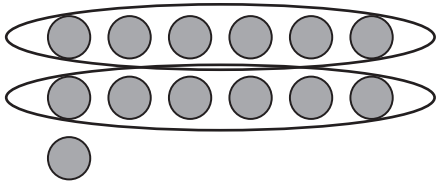
$\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$        $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$

b 45 people get into 9 cars. How many people are in each car?

$\boxed{\phantom{0}} \times \boxed{\phantom{0}} = \boxed{\phantom{0}}$        $\boxed{\phantom{0}} \div \boxed{\phantom{0}} = \boxed{\phantom{0}}$

# Division – remainders

Sometimes division is not exact.

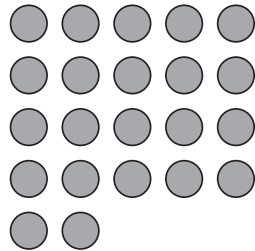


From 13, we can make 2 fair shares of 6 with 1 left over. We call the left over the remainder.

$$13 \div 6 = 2 \text{ remainder } 1$$

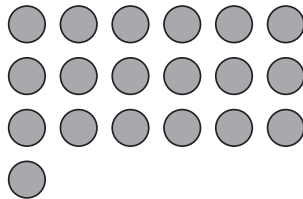
**1** In each array, ring the fair shares to see the remainder:

**a**



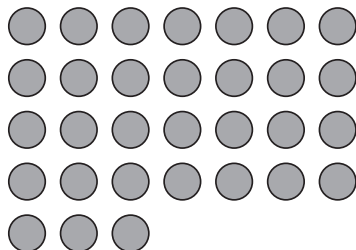
$$22 \div 5 = \square \text{ remainder } \square$$

**b**



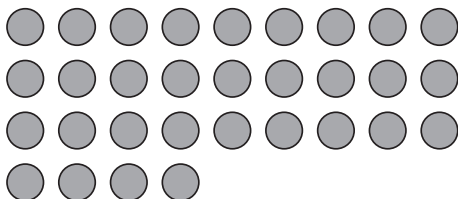
$$19 \div 6 = \square \text{ remainder } \square$$

**c**



$$31 \div 7 = \square \text{ remainder } \square$$

**d**



$$31 \div 9 = \square \text{ remainder } \square$$

# Division – remainders

Now use your multiplication facts.

$$25 \div 6 = \boxed{\quad ? \quad} \quad \text{Think} \quad 4 \times 6 = 24 + 1 \text{ is } 25$$

$$\text{So, } 25 \div 6 = 4 \text{ remainder } 1$$

## 2 Use your multiplication facts to write the division facts and the remainder:

a  $32 \div 10 = \boxed{\quad ? \quad}$  Think  $\boxed{\quad} \times \boxed{\quad} = \boxed{\quad} + \boxed{\quad}$  is  $\boxed{\quad}$

So,  $\boxed{\quad} \div \boxed{\quad} = \boxed{\quad}$  remainder  $\boxed{\quad}$

b  $30 \div 4 = \boxed{\quad ? \quad}$  Think  $\boxed{\quad} \times \boxed{\quad} = \boxed{\quad} + \boxed{\quad}$  is  $\boxed{\quad}$

So,  $\boxed{\quad} \div \boxed{\quad} = \boxed{\quad}$  remainder  $\boxed{\quad}$

c  $37 \div 9 = \boxed{\quad ? \quad}$  Think  $\boxed{\quad} \times \boxed{\quad} = \boxed{\quad} + \boxed{\quad}$  is  $\boxed{\quad}$

So,  $\boxed{\quad} \div \boxed{\quad} = \boxed{\quad}$  remainder  $\boxed{\quad}$

## 3 Complete each word problem:

a 39 pencils were shared between 6 kids. How many did each kid get?

$$\boxed{\quad} \div \boxed{\quad} = \boxed{\quad} \text{ remainder } \boxed{\quad}$$

b 43 fish were divided between 6 tanks. How many fish are in each tank?

$$\boxed{\quad} \div \boxed{\quad} = \boxed{\quad} \text{ remainder } \boxed{\quad}$$

c From 17 flowers, 5 flowers were arranged in each vase. How many vases were used?

$$\boxed{\quad} \div \boxed{\quad} = \boxed{\quad} \text{ remainder } \boxed{\quad}$$

## 4 Write in the missing digit to make this statement true:

$$\boxed{\quad} \div 6 = 8 \text{ remainder } 2$$