

# Diving into Mastery - Diving

## Adult Guidance with Question Prompts

Children use their knowledge of the ten times table and counting in tens to help them divide efficiently. They use sharing or grouping as appropriate. They write division calculations using the symbols  $\div$  and  $=$ .

How many cakes are in each row?

How many cakes are there in total?

Do you need to count in ones or is there a quicker way?

How many groups of 10 can you make?

What division calculation can we write?

How many tennis balls are there?

Can you circle them in groups so that all ten people will have an equal number of balls?

How many will each person get?

What is missing from each of these sentences?

## Dividing by 10



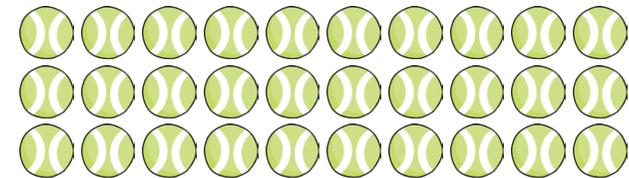
Cupcakes come in boxes of 10.



How many boxes can be filled?

$\div$   =

Share the tennis balls between 10 people.



Complete these sentences about the balls:

There are  people.

Each person gets  balls.

There are  tens in 30.

3 tens  $\div$  1 ten =

=  $30 \div 10$

$\times$   = 30

# Diving into Mastery – Deeper

## Adult Guidance with Question Prompts

Children use reasoning skills to explain whether statements about multiplying and dividing by ten are true or false. They also use their knowledge of place value and the symbols =, < and >. Children can use drawings or concrete materials to help them make their decisions.

How will you find out if this statement is true or false?

Do you need to do a calculation?

Do you need to do more than one calculation to be sure?

Is this always true/false?

Can you use a drawing or equipment to help you decide?

What do the symbols < and > mean?

## Dividing by 10



True or false? Explain your answers.

$$40 \div 10 = 40 \div 4$$

If you divide a number by 10, the answer is always odd.

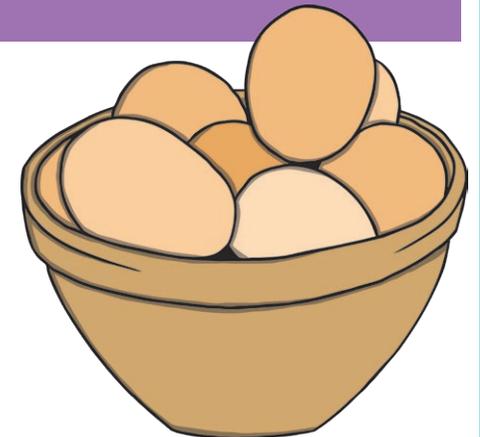
$$90 \div 10 > 60 \div 10$$

If you divide 60 by 10, the answer is even.

To halve a number, you divide it by 10.

$$10 \div 10 < 100 \div 10$$

If there are 60 eggs and you group them into boxes of 10, there will be none left over.



# Diving into Mastery – Deepest Adult Guidance with Question Prompts

Children solve sharing and grouping division problems then write their own division stories to match given division calculations. They write calculations using the symbols  $\div$  and  $=$ . They use drawings or concrete materials to support their calculating.

Is this a sharing or grouping problem?

How do you know?

What's the difference?

Are the calculations written differently?

How many books/pencils are there in total?

How many groups have you made?

How many in each group?

What calculation can you write?

Can you make up your own division story?

Will it be a sharing story or a grouping story?

Can you draw a picture, an array or a bar model to represent your story?

Can you represent your calculation using equipment?

Which is more efficient: grouping or sharing? Why?

## Dividing by 10



Mr Smith shares 30 books between 10 tables.

How many will be on each table?

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



Write or draw two of your own sharing stories to match these calculations:

$$60 \div 10$$

$$20 \div 10$$



I want 80 pencils. How many packs do I need?

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



Write or draw two of your own grouping stories to match these calculations:

$$70 \div 10$$

$$40 \div 10$$