


Addition using dienes


$2 + 4 = 6$



$2 \text{ ones} + 4 \text{ ones} = 6 \text{ ones}$


This is ten ones

$20 + 40 = 60$



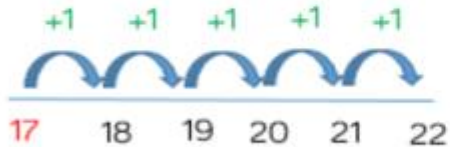
$2 \text{ tens} + 4 \text{ tens} = 6 \text{ tens}$

$19 + 20 = 39$



Addition using a number line

$17 + 5 =$



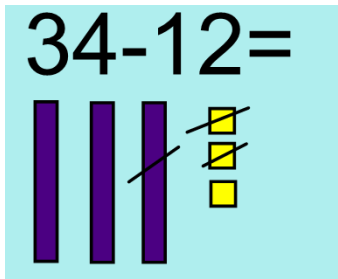
Can you put the larger number in your head and count on the smaller number? Start at 17 and count on 5

Can we use number bonds to solve the addition more efficiently?



We can partition 5 into 3 and 2 and use this to bridge the 10

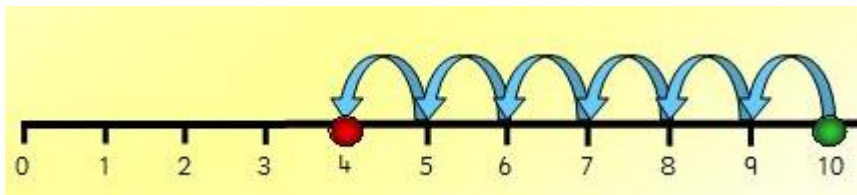
Subtraction using number dienes



Only draw the dienes for the first number and then cross out the ones to be taken away.

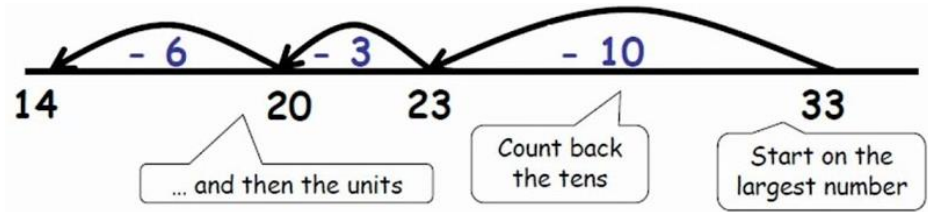
Subtraction using a numberline

$10 - 6 =$

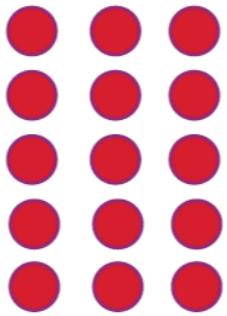


Start from the right hand side and count back.

$33 - 19 =$



Multiplication using arrays – Children to draw the arrays for a multiplication sum.



This array shows

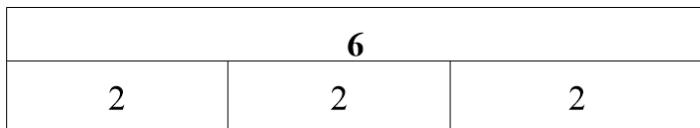
5 rows of 3

5×3

It also shows $3 \times 5 = 15$, 3 columns of 5

Multiplication using bar models

$3 \times 2 = 6$

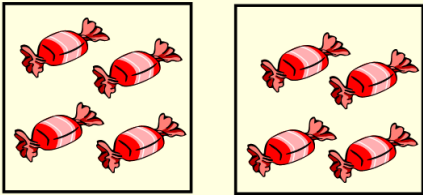


Division using sharing

Share 8 sweets between 2 people

8 divided by 2

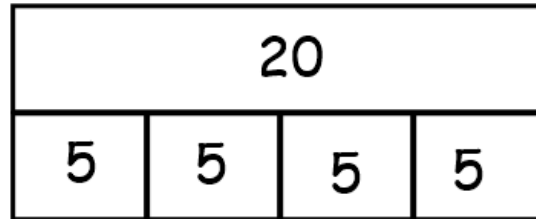
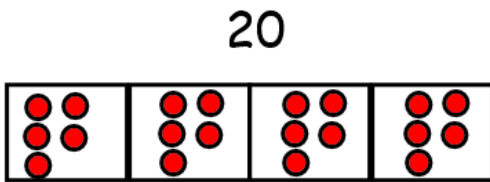
$$8 \div 2 =$$



Children would draw one sweet (or just a circle) in each group alternating each time until they reach 8.

Division using bar models (progression from sharing)

$$20 \div 4 = 5$$



Example of word problems

Which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?

Nizar played 6 football games this year. He scored 3 goals in each game. How many goals did he score altogether?

Laura is making 6 pizzas. She needs 2 tomatoes for each pizza. How many tomatoes does Laura need altogether?

At a recent clean up of the playground. The 3 children collected 196 pieces of rubbish. Alex collects 64 pieces, Dan 73 so how many has Joe collected?

In a week John saves £1.75, on Monday he has 55p on Wednesday 75p. How much does he save the rest of the week?