

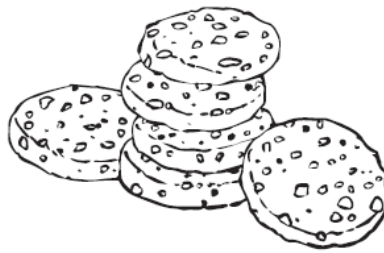
# Bar Modelling Assessment Questions

## Overview

Here is a selection of assessment questions taken from KS1 and KS2 SAT's papers and from the White Rose Assessments. All of these problems can be represented using a bar model.

## Year 1 examples

- 1** There are 6 cookies in a jar.  
Jack eats 4 cookies.  
How many are left?



**12** Ajay's plant was **11** centimetres tall.

It grows **7** centimetres taller.

How tall is the plant now?



**24**



**biscuits**  
**20p** each



**cakes**  
**25p** each

Sam buys **3** biscuits and **1** cake.

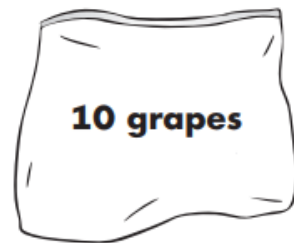
How much does Sam spend **altogether**?

**30** Ben has **7** bags of grapes.

Each bag has **10** grapes.

Ben gives **25** grapes to his friends.

How many grapes does he have **left**?



9

There are 52 books left over from a book sale.



Tim, Abdul and Rory are given 4 books each.

The rest of the books are shared equally between 5 classes.

How many books does each class receive?

14

There are 67 adults at a disco.

There are 6 times as many children as adults.

How many people are at the disco altogether?

17

A box of chocolates contains dark, milk and white chocolates.

$\frac{4}{15}$  of the box are white chocolate.

$\frac{8}{15}$  of the box are milk chocolate.

6 chocolates in the box are dark chocolate.

How many chocolates are there in the box altogether?

13

3 small plant pots cost £6



2 large plant pots **and** 6 small plant pots cost £21

What is the cost of 1 large plant pot?

18

The children in Class 5 vote for their end of term trip.

A quarter of the children vote to go to the cinema.

$\frac{2}{5}$  of the children vote to go bowling.

The rest of the children vote to go swimming.

What **percentage** of the children want to go swimming?

2

Stefan completes this calculation.

$$\begin{array}{r} 95 \\ - 67 \\ \hline 28 \end{array}$$

Write an **addition** calculation he could use to check his answer.

$$\begin{array}{r} \square \square \\ + \square \square \\ \hline \square \square \end{array}$$

16

A book has 276 pages.

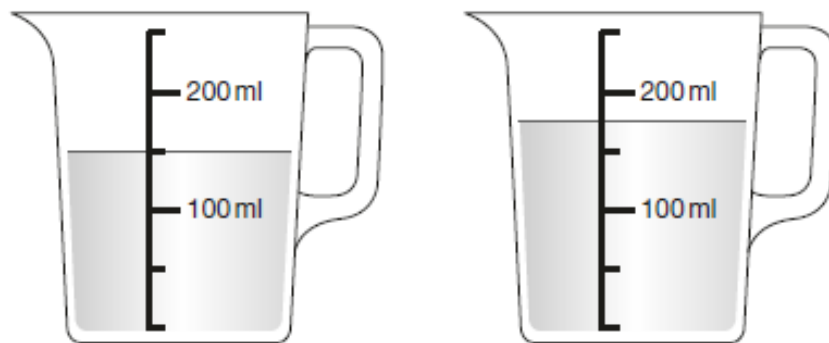
Amina has read  $\frac{1}{3}$  of the book.

How many pages are **left** for Amina to read?

11

Stefan has **600 millilitres** of water in a bottle.

He pours some of the water into two measuring jugs as shown.

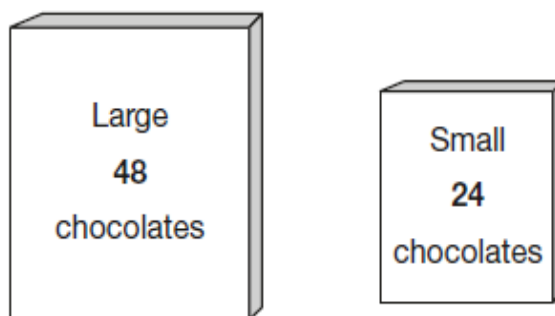


How many millilitres of water are left in Stefan's bottle?

8

Ken buys 3 large boxes and 2 small boxes of chocolates.

Each large box has 48 chocolates. Each small box has 24 chocolates.



How many **chocolates** did Ken buy altogether?