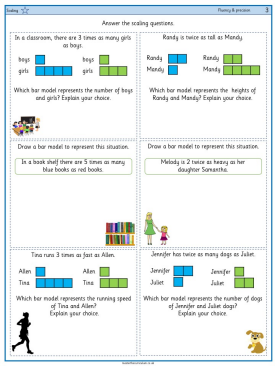
★ Multiplication & Division – Scaling

Children are exposed to problems involving scaling. They are introduced to drawing bar models.

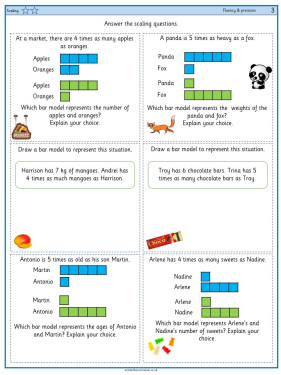
Bar models are useful for visualising the concept. Children are able to answer questions that use the vocabulary “times as many”.



★★ Multiplication & Division – Scaling

On this sheet, children are asked which bar model is considered as the best representation for the given information.

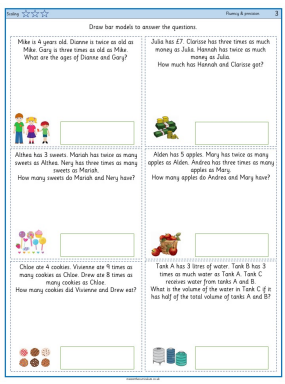
They also have to draw bar models where they write number in each bar to represent their calculation.



★★★ Multiplication & Division – Scaling

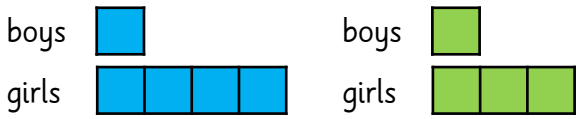
Children now apply their understanding of drawing bar models for the word problems they encounter on this sheet.

On this sheet, they have to draw three bar models which are helpful to solve the more complex problems they now solve.



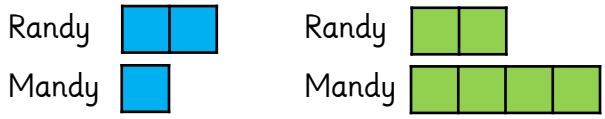
Answer the scaling questions.

In a classroom, there are 3 times as many girls as boys.



Which bar model represents the number of boys and girls? Explain your choice.

Randy is twice as tall as Mandy.



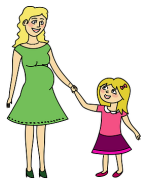
Which bar model represents the heights of Randy and Mandy? Explain your choice.

Draw a bar model to represent this situation.

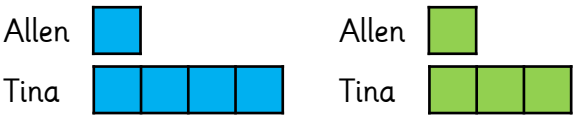
In a book shelf there are 5 times as many blue books as red books.

Draw a bar model to represent this situation.

Melody is 2 twice as heavy as her daughter Samantha.

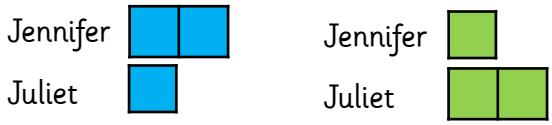


Tina runs 3 times as fast as Allen.



Which bar model represents the running speed of Tina and Allen?
Explain your choice.

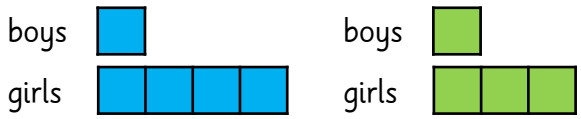
Jennifer has twice as many dogs as Juliet.



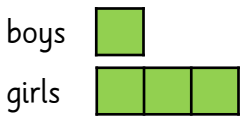
Which bar model represents the number of dogs of Jennifer and Juliet dogs?
Explain your choice.

Answer the scaling questions.

In a classroom, there are 3 times as many girls as boys.

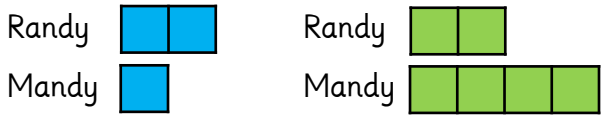


Which bar model represents the number of boys and girls? Explain your choice.

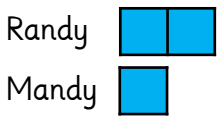


1 bar for boys and 3 bars for girls.

Randy is twice as tall as Mandy.



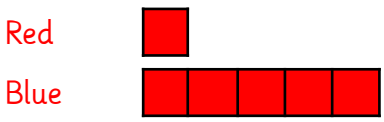
Which bar model represents the heights of Randy and Mandy? Explain your choice.



1 bar for Mandy and 2 bars for Randy.

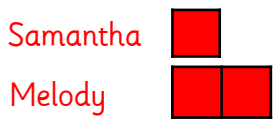
Draw a bar model to represent this situation.

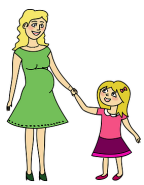
In a book shelf there are 5 times as many blue books as red books.



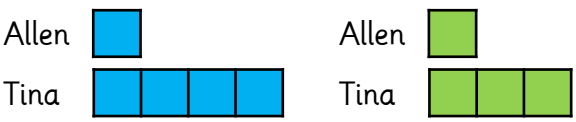
Draw a bar model to represent this situation.

Melody is 2 twice as heavy as her daughter Samantha.

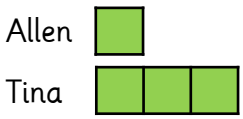




Tina runs 3 times as fast as Allen.

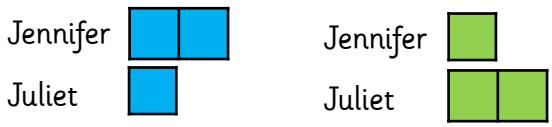


Which bar model represents the running speed of Tina and Allen? Explain your choice.

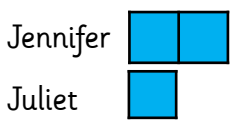


1 bar for Allen and 3 bars for Tina.

Jennifer has twice as many dogs as Juliet.



Which bar model represents the number of dogs of Jennifer and Juliet dogs? Explain your choice.



1 bar for Juliet and 2 bars for Jennifer.

Answer the scaling questions.

At a market, there are 4 times as many apples as oranges.

Apples
Oranges

Apples
Oranges

Which bar model represents the number of apples and oranges? Explain your choice.

A panda is 5 times as heavy as a fox.

Panda
Fox

Panda
Fox

Which bar model represents the weights of the panda and fox? Explain your choice.

Draw a bar model to represent this situation.

Harrison has 7 kg of mangoes. Andrei has 4 times as much mangoes as Harrison.

Draw a bar model to represent this situation.

Troy has 6 chocolate bars. Trina has 5 times as many chocolate bars as Troy.

Antonio is 5 times as old as his son Martin.

Martin
Antonio

Martin
Antonio

Which bar model represents the ages of Antonio and Martin? Explain your choice.

Arlene has 4 times as many sweets as Nadine.

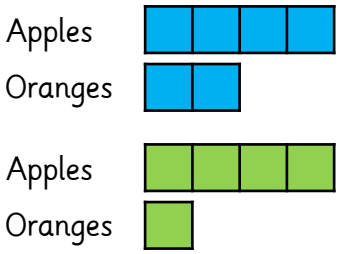
Nadine
Arlene

Arlene
Nadine

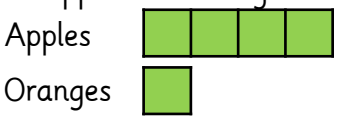
Which bar model represents Arlene's and Nadine's number of sweets? Explain your choice.

Answer the scaling questions.

At a market, there are 4 times as many apples as oranges.

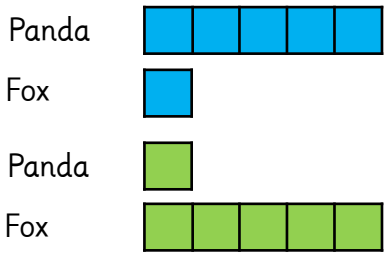


Which bar model represents the number of apples and oranges? Explain your choice.

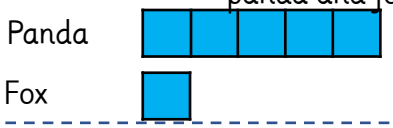


1 bar for oranges and 4 bars for apples.

A panda is 5 times as heavy as a fox.



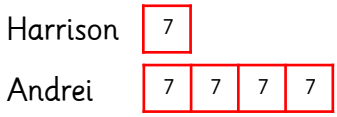
Which bar model represents the weights of the panda and fox?



1 bar for fox and 5 bars for Panda.

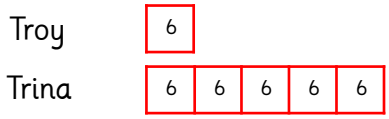
Draw a bar model to represent this situation.

Harrison has 7 kg of mangoes. Andrei has 4 times as much mangoes as Harrison.

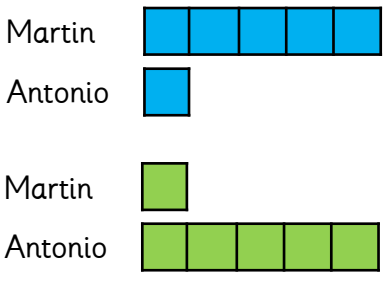


Draw a bar model to represent this situation.

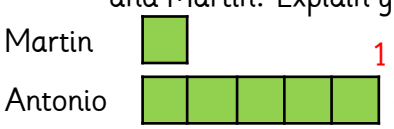
Troy has 6 chocolate bars. Trina has 5 times as many chocolate bars as Troy.



Antonio is 5 times as old as his son Martin.



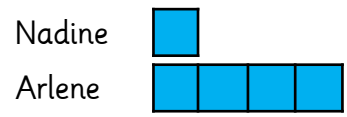
Which bar model represents the ages of Antonio and Martin? Explain your choice.



1 bar for Martin and 5 bars for Antonio.

Arlene has 4 times as many sweets as Nadine.

Which bar model represents Arlene's and Nadine's number of sweets? Explain your choice.



1 bar for Nadine and 4 bars for Arlene.

Draw bar models to answer the questions.

Mike is 4 years old. Dianne is twice as old as Mike. Gary is three times as old as Mike. What are the ages of Dianne and Gary?

Julia has £7. Clarisse has three times as much money as Julia. Hannah has twice as much money as Julia.
How much has Hannah and Clarisse got?

Althea has 3 sweets. Mariah has twice as many sweets as Althea. Nery has three times as many sweets as Mariah. How many sweets do Mariah and Nery have?

Alden has 5 apples. Mary has twice as many apples as Alden. Andrea has three times as many apples as Mary. How many apples do Andrea and Mary have?

Chloe ate 4 cookies. Vivienne ate 9 times as many cookies as Chloe. Drew ate 8 times as many cookies as Chloe. How many cookies did Vivienne and Drew eat?

Tank A has 3 litres of water. Tank B has 3 times as much water as Tank A. Tank C receives water from tanks A and B. What is the volume of the water in Tank C if it has half of the total volume of tanks A and B?

Draw bar models to answer the questions.

Mike is 4 years old. Dianne is twice as old as Mike. Gary is three times as old as Mike. What are the ages of Dianne and Gary?

Mike	4			
Dianne	4	4		
Gary	4	4	4	

Dianne is 8 years old.
Gary is 12 years old

Julia has £7. Clarisse has three times as much money as Julia. Hannah has twice as much money as Julia.
How much has Hannah and Clarisse got?

Julia	7			
Clarisse	7	7	7	
Hannah	7	7		

Hannah has £14.
Clarisse has £21.

Althea has 3 sweets. Mariah has twice as many sweets as Althea. Nery has three times as many sweets as Mariah. How many sweets do Mariah and Nery have?

Althea	3					
Mariah	3	3				
Nery	3	3	3	3	3	3

Mariah has 6 sweets.
Nery has 18 sweets.

Alden has 5 apples. Mary has twice as many apples as Alden. Andrea has three times as many apples as Mary. How many apples do Andrea and Mary have?

Alden	5					
Mary	5	5				
Andrea	5	5	5	5	5	5

Andrea has 30 sweets.
Mary has 10 sweets.

Chloe ate 4 cookies. Vivienne ate 9 times as many cookies as Chloe. Drew ate 8 times as many cookies as Chloe. How many cookies did Vivienne and Drew eat?

Chloe	4								
Vivienne	4	4	4	4	4	4	4	4	4
Drew	4	4	4	4	4	4	4	4	

Vivienne ate 36 sweets.
Drew ate 32 sweets.

Tank A has 3 litres of water. Tank B has 3 times as much water as Tank A. Tank C receives water from tanks A and B. What is the volume of the water in Tank C if it has half of the total volume of tanks A and B?

Tank A	3			
Tank B	3	3	3	
Tank C	3	3		

Tank B has 9 litres. Tank C has 6 litres.