5.1 Representing Relations

Lesson 2

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Connect Notes:

Consider the set of fruits and the set of colours

We can associate fruits with their colours

An Apple — may have the colour — RED

elements of 1st set — Association — Elements of 2nd set

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Connect NOTES:

So, this set of ordered pairs is a relation

Here are 2 ways to represent this relation

Ordered Pairs	Table
(apple, red) (apple, green) (blueberry, blue) (cherry, red) (huckleberry, blue)	FRUIT / COLOUR Apple / red Apple / green Blueberry / blue Cherry / red Huckleberry / blue

The heading of each column describes each set

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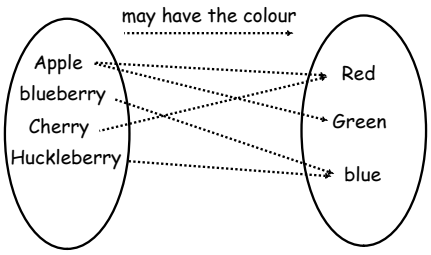
Connect NOTES:

Here is a 3rd way to represent the relation

Arrow Diagram - the 2 ovals represent the sets.
Each arrow associates an element for the first set with an element of the 2nd set.



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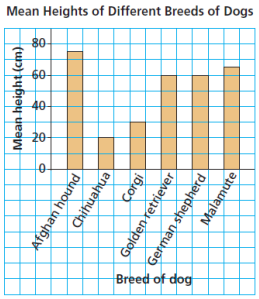
Practice EXAMPLE 1

Different breeds of dogs can be associated with their mean heights. Consider the relation represented by this graph.



Represent the following relation as a:

1) a table

2) as an arrow diagram

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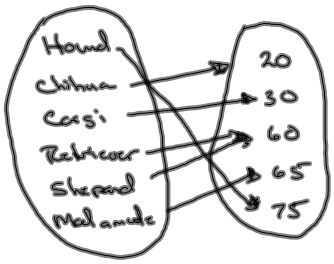
Practice EXAMPLE 1

Solution:

Table

Breed	height
Hound	75
Chihua	20
Corgi	30
Retriever	60
Shepard	60
Malamute	65

Arrow Diagram



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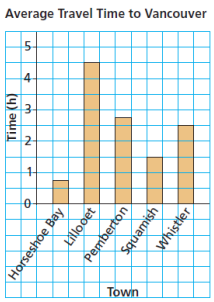
Practice YOU TRY!

Different towns in British Columbia can be associated with the average time, in hours, that it takes to drive to Vancouver. Consider the relation by this graph.



Represent the following relation as a:

1) a table

2) as an arrow diagram

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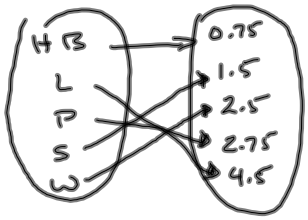
Practice YOU TRY!

Solution:

table

Town	Time
Horseshoe Bay	0.75
Lillooet	4.5
Pemberton	2.75
Squamish	1.5
Whistler	2.5

Arrow Diagram



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Practice HOMEWORK!

Textbook Questions:

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