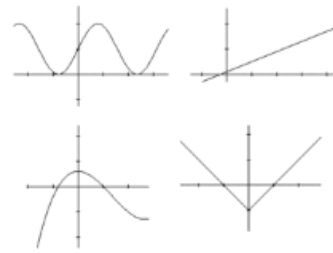


Relations and Functions

↳ Chapter 5



Section 5.1 Representing Relations

Review Grade 9

Relation → a rule that relates two quantities, the independent and dependent variables.

What can you remember about independent and dependent variables?

independent variable

dependent variable

In grade 10 we build on the definition of relation.

Relation → a rule that associates the elements of one set with elements in another set.

→ for example: we can associate fruits with their colors, a pet with its owner, a student with their mark on a test, etc

Set → a collection of distinct objects.

Element → an element of a set is one object in the set.

A relation can be represented in a variety of ways:

words

pictures

table of values

graph

ordered pairs

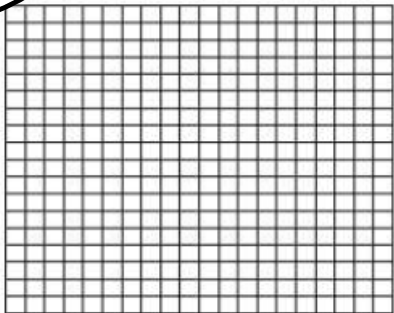
equation or expression

arrow diagram


Example 1

A photography studio charges a booking fee of \$15 plus \$8 for each sheet of pictures ordered.

- a) Write an equation to represent this relation. Use **C** as the total cost and **p** for the number of sheets ordered.
- b) Complete the chart below to represent the relation in a table of values, as ordered pairs and a graph.

Equations	Table of Values <table border="1"><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>												
Ordered Pairs	Graph 												

Words
A photography studio charges a booking fee of \$15 plus \$8 for each sheet of pictures ordered.



Do we connect the points on the graph?

Discrete Data → The numbers between the given points are not meaningful. The data can only take certain values.
ex: # of students in a class

Continuous Data → All points on the graph are meaningful and make sense. The data can take on any value. ex: the height of trees

c) Represent this relation using an arrow diagram.

[Work Book Questions](#)

p.262 - 263 #3a, 4ab, 6ab, 7ab

[Extra Practice Questions](#)

p.262 - 263 #3b, 5ab