Attributes

Attributes are what we call data stored on geometry. An example of this would be the position attribute which contains the vector that describes each vertex of a geometry in 3D space.

Where possible data is converted implicitly, eg, using a vector attribute in an Attribute Math node would take an average of the vector values ((X+Y+Z)/3). Similarly, using a float inside an Attribute Vector Math node will be read like this, 5.2 = (5.2, 5.2, 5.2).

Similarly for domains, attributes will be automatically converted to the correct domain if possible for a calculation. A common example is normal, which is in the face domain, being converted to Vertex domain to use in calculations on points.

Data Types:

Float	Floating point numbers are used to describe fractional values. For example, 1.6 or 2.0 or -13.255 etc
Integer	Integers are whole numbers with no fractional part. For example, 2 or -18 etc
Boolean	Boolean values are simply on or off. When converted to float these read as 1.0 and 0.0 in calculations. In the spreadsheet and UI they are shown as a tickbox.
Vector	A 3D vector containing 3 float values describing X, Y and Z.
2D Vector	A 2D vector containing 2 float values describing X and Y. We find these in UV Maps.
4D Vector	A 4D vector containing 4 float values describing X, Y, Z and W, or more commonly, RGBA. We find these with Vertex Colours and data from the Attribute Sample Texture node. When converted to vectors, they simply drop the W or A channel.

Domains:

Vector / Point	Attributes that exist on the vertices of a mesh such as position. NOTE: In Point Cloud objects, ALL attributes are on the Point Domain.
Edge	Attributes that exist on the edges such as crease.
Face	Attributes that exist on the faces such as normal.
Face Corner	Attributes that exist on the face corners such as UV Maps.

Further Reading:

Attribute Documentation:
https://docs.blender.org/manual/en/latest/modeling/geometry_nodes/attributes_reference.html

Spreadsheet Documentation:
https://docs.blender.org/manual/en/latest/editors/spreadsheet.html

Built-In Attributes

These are attributes that always exist on a mesh. Their data type is fixed so cannot be converted or moved to other domains.

Name	Data Type	Domain
position	Vector	Vertex
crease	Float	Edge
normal	Vector	Face
shade_smooth	Boolean	Face
material_index	Integer	Face
radius	Float	Vertex (present on point cloud objects)

Named Attributes

These are attributes do not exist by default but when used, Blender understands that they refer to something.

Name	Data Type	Domain
scale	Vector	Vertex
rotation	Vector	Vertex
id	Integer	Vertex

Custom Attributes

These are attributes that are created by the user.

UV Maps	2D Vector	Face Corner
Vertex Colours	4D Vector	Face Corner
Vertex Groups	Float	Vertex
[Any string of characters]	[Any data type]	[Any domain]