**Geometry**

Geometry is the study of **shapes**, **sizes**, **patterns**,and **positions**.

It occurs in all cultures, through at least one of these human activities:

1. Building/structures (building or repairing a house, laying out a garden, making a kite).

2. Machines/motion (dissembling and reassembling a motor, riding a bike, sawing a board in half, swinging, seeing how pieces fit together).

3. Navigating/star-gazing (observing Matariki, planning travel, using maps).

4. Art/patterns (designs, symmetries, representations, motifs).

5. Measurement (How big is it? How far is it?)

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| **Examples of human activities** | | | | | |
| **Culture** | **Building structures** | **Machines** | **Navigation** | **Art/patterns** | **Measurement** |
| Māori | Building a marae  Building a waka  Weight, height, depth etc. | Riding in a waka – paddling/ timing for motion | How Māori navigated using the stars to get to Aotearoa/ New Zealand  Matariki | Tukutuku panels  Māori carvings | Using the thumb and arm to measure length  Harakeke − to make rope to measure length |
| What jobs need to use knowledge about geometry | Architect  Boat builder | Fabrication engineer  Lift technician | Astrophysics/ astronomer  Scientist  Teacher | Artist  Carver | Carpenter  Baker  Chef  Professional sportsperson |

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