

## Defining concepts and contexts

### Key concepts for MYP Mathematics

**Form** is the shape and underlying structure of an entity or piece of work, including its organization, essential nature and external appearance.

**Logic** is a method of reasoning and a system of principles used to build arguments and reach conclusions.

**Relationships** are the connections and associations between properties, objects, people and ideas—including the human community's connections with the world in which we live. Any change in relationship brings consequences—some of which may occur on a small scale, while others may be far-reaching, affecting large networks and systems such as human societies and the planetary ecosystem.

### Related concepts for MYP Mathematics

**Approximation** - A quantity or a representation that is nearly but not exactly correct.

**Change** - A variation in size, amount or behaviour.

**Equivalence** - The state of being identically equal or interchangeable, applied to statements, quantities or expressions.

**Generalization** - A general statement made on the basis of specific examples.

**Models** - Depictions of real-life events using expressions, equations or graphs.

**Patterns** - Sets of numbers or objects that follow a specific order or rule.

**Quantity** - An amount or number.

**Representation** - The manner in which something is presented.

**Simplification** - The process of reducing to a less complicated form.

**Space** - The frame of geometrical dimensions describing an entity.

**Systems** - Groups of interrelated elements.

**Validity** - Using well-founded, logical mathematics to come to a true and accurate conclusion or a reasonable interpretation of results.

## Global Contexts

**Fairness and development** - What are the consequences of our common humanity? Students will explore rights and responsibilities; the relationship between communities; sharing finite resources with other people and with other living things; access to equal opportunities; peace and conflict resolution.

**Globalization and sustainability** - How is everything connected? Students will explore the interconnectedness of human-made systems and communities; the relationship between local and global processes; how local experiences mediate the global; the opportunities and tensions provided by world interconnectedness; the impact of decision-making on humankind and the environment.

**Identities and relationships** - Who am I? Who are we? Students will explore identity; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; what it means to be human.

**Orientation in space and time** - What is the meaning of “where” and “when”? Students will explore personal histories; homes and journeys; turning points in humankind; discoveries; explorations and migrations of humankind; the relationships between, and the interconnectedness of, individuals and civilizations, from personal, local and global perspectives.

**Personal and cultural expression** - What is the nature and purpose of creative expression? Students will explore the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.

**Scientific and technical innovation** - How do we understand the world in which we live? Students will explore the natural world and its laws; the interaction between people and the natural world; how humans use their understanding of scientific principles; the impact of scientific and technological advances on communities and environments; the impact of environments on human activity; how humans adapt environments to their needs.