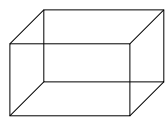


## Homework Help for Math Out of the Box Developing Geometric Logic: Shapes and Paths

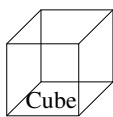
Information about homework assignments is provided to help parents and other homework helpers with the mathematics ideas that are being developed. The homework help includes definitions of key vocabulary, questions to ask that will help students connect to the classroom investigations, problem solving examples, and other helpful explanations.

### Homework 3A1 follows Lesson 4

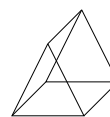
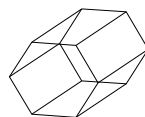
Prisms are three-dimensional shapes with two ends or bases which are congruent, parallel polygons and with other faces that are rectangles or, more generally, parallelograms. Prisms are named by their bases. A cube is a special rectangular prism because all of its faces are congruent (same shape and size). Examples of prisms include:



Rectangular  
Prisms



Hexagonal  
Prism

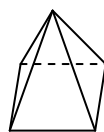


Triangular  
Prism

A pyramid is a three-dimensional shape with one face, the base, which has three or more edges, and with other faces, which are triangles, that share a common vertex. A pyramid is named by the shape of its base. Examples of pyramids include:

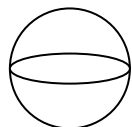


Triangular  
Pyramid



Rectangular  
Pyramid

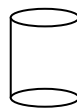
Other three-dimensional shapes studied in these lessons include the following:



Sphere



Cone



Cylinder

### Homework 3B1 follows Lesson 5

The classification system for naming polygons by the number of sides used in these lessons is:

Three-sided–Triangles  
Four-sided–Quadrilaterals  
Five-sided–Pentagons  
Six-sided–Hexagons  
Seven-sided–Heptagon  
Eight-sided–Octagon  
Nine-sided–Nonagon  
Ten-sided–Decagon

### Homework 3B2 follows Lesson 7

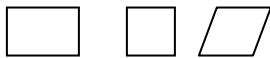
A quadrilateral is a polygon with 4 sides and 4 angles.

Examples of quadrilaterals:



A parallelogram is a quadrilateral with 2 pairs of parallel sides.

Examples of parallelograms:



### Homework 3C1 Lessons 8

Definitions that may help with Homework 3C1 include the following:

**Acute angle:** An angle that is smaller than a right angle.

**Intersecting lines:** Lines that cross at a point.

**Line segment:** A part of a line with two endpoints.

**Obtuse angle:** An angle that measures greater than 90 degrees but less than 180 degrees.

**Parallel lines:** Two lines that extend in the same direction and remain the same distance apart.

**Perpendicular lines:** Lines that intersect to form right angles.

**Ray:** A part of a line that begins at a point and continues forever in one direction.

**Right angle:** An angle that measures 90 degrees.

Lessons 1-20

Developing Algebraic Thinking: Shapes and Paths

Math Out of the Box™ Clemson University

### Homework 3D1 follows Lesson 1

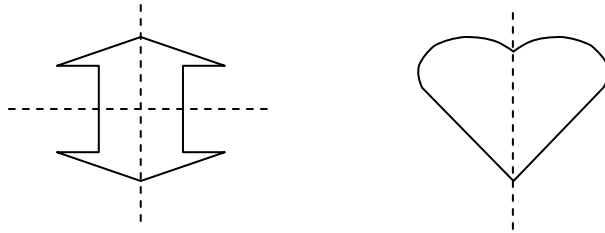
A **fair test** is a plan in which students determine certain standards that will be used in collecting data. The following questions are helpful in setting up a fair test:

1. What tool will be used?
2. What procedure will we use to measure the object?
3. What units of measure will be used?

### Homework 3E1 follows Lesson 16

A shape has line symmetry if a line divides the shape into at least two congruent parts.

Following are examples of shapes that have line symmetry:



### Homework 3E2 follows Lesson 20

To locate a point on a grid when given a coordinate, such as (3, 6), first move right or left on the x-axis from the origin or zero. For this coordinate move 3 units to the right. Next, move up or down on the y-axis. For this coordinate, move up 6 units.