Process Standards Rubric

Geometry

Exercise

Expectations
Instructional programs from pre-kindergarten through grade 12 should enable all students to:

Expectations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Drill Sheet 1	Drill Sheet 2	Review A	Review B	Review C
GOAL 1: Problem Solving — • build new mathematical knowledge through problem solving; • solve problems that arise in mathematics and in other contexts; • apply and adapt a variety of appropriate strategies to solve problems; • monitor and reflect on the process of mathematical problem solving.							✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓
GOAL 2: Reasoning & Proof — • recognize reasoning and proof as fundamental aspects of mathematics; • make and investigate mathematical conjectures; • develop and evaluate mathematical arguments and proofs; • select and use various types of reasoning and methods of proof.	✓																			
GOAL 3: Communication — • organize and consolidate their mathematical thinking through communication; • communicate their mathematical thinking coherently and clearly to peers, teachers, and others; • analyze and evaluate the mathematical thinking and strategies of others; • use the language of mathematics to express mathematical ideas precisely.						✓					✓	✓						✓	✓	
GOAL 4: Connections — • recognize and use connections among mathematical ideas; • understand how mathematical ideas interconnect and build on one another to produce a coherent whole; • recognize and apply mathematics in contexts outside of mathematics.						✓					✓	✓	✓	✓	✓					
GOAL 5: Representation — • create and use representations to organize, record, and communicate mathematical ideas; • select, apply, and translate among mathematical representations to solve problems; • use representations to model and interpret physical, social, and mathematical phenomena.	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓					✓	✓	✓	✓	

Geometry CC3108

Teacher Guide

Our resource has been created for ease of use by both *TEACHERS* and *STUDENTS* alike.

Introduction

Our resource provides ready-to-use worksheet activities for students in third through fifth grade. Our resource meets the geometry concepts addressed by the NCTM and encourages the students to learn and review the concepts in unique ways. Our resource can be used with the whole class, small group, or as independent work. The activities vary in difficulty and content and enables teachers and students to have a variety of teaching and learning opportunities. Included in our resource are activities on two- and three-dimensional shapes, volume and area, transforming shapes, and coordinating points. Visual models and concrete examples are provided to assist visual learners. Teachers may also use manipulative methods, such as pattern blocks, to assist kinesthetic learners in presenting the exercises in this book.

## How Is Our Resource Organized?

STUDENT HANDOUTS

Reproducible **task sheets** and **drill sheets** make up the majority of our resource.

The **task sheets** contain challenging problem-solving tasks, many centered around 'real-world' ideas or problems, which push the boundaries of critical thought and demonstrate to students why mathematics is important and applicable in the real world. It is not expected that all activities will be used, but are offered for variety and flexibility in teaching and assessment. Many of the task sheet problems offer space for reflection, and opportunity for the appropriate use of technology, as encouraged by the *NCTM's Principles & Standards for School Mathematics*.

The **drill sheets** are provided to help students with their procedural proficiency skills, as emphasized by the *NCTM's Curriculum Focal Points*.

The **NCTM Content Standards Assessment Rubric** (*page 4*) is a useful tool for evaluating work in many of the activities in our resource. The **Reviews** (*pages 24-26*) are divided by grade and can be used for a follow-up review or assessment at the completion of the unit.

PICTURE CUES

This resource contains three main types of pages, each with a different purpose and use. A **Picture Cue** at the top of each page shows, at a glance, what the page is for.

Teacher Guide
• Information and tools for the teacher

Student Handout
• Reproducible worksheets and activities

EZ Easy Marking™ Answer Key
• Answers for student activities

EASY MARKING™ ANSWER KEY

Marking students' worksheets is fast and easy with this **Answer Key**. Answers are listed in columns – just line up the column with its corresponding worksheet, as shown, and see how every question matches up with its answer!
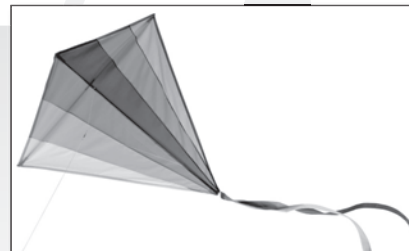
Every question matches up with its answer!

SAMPLE
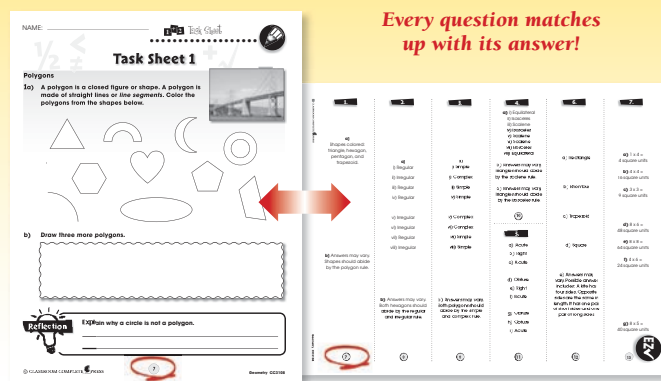
Task Sheet 6

Quadrilaterals

6) A quadrilateral is any four-sided shape. The angles of a quadrilateral always have a sum of 360 degrees.

Match each definition to its shape.

a) A four-sided polygon having all right angles.

b) A four-sided polygon with two pairs of parallel sides.

c) A four-sided polygon with one pair of opposite parallel sides.

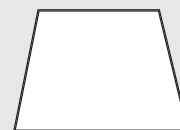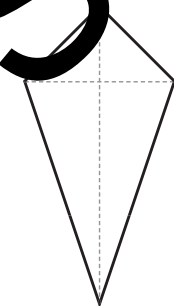**d) A four-sided polygon with all sides of equal length and all angles 90 degrees.**

SAMPLE

	Square
	Rhombus
	Rectangle
	Trapezoid

e) This shape is a kite. Write a definition for this shape.

_____

_____

_____

_____

Explore With Technology With the help of an adult, use the Internet, find pictures, drawings, and names of other quadrilaterals.

Which quadrilateral is your favorite?

Task Sheet 15
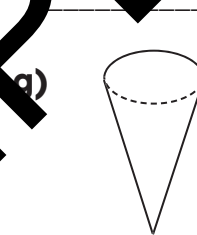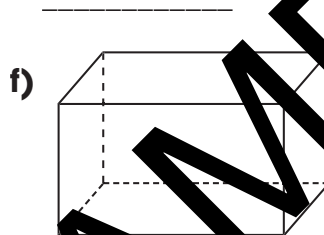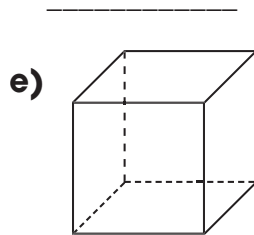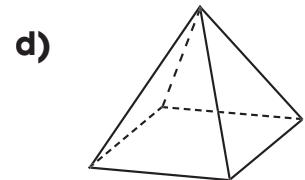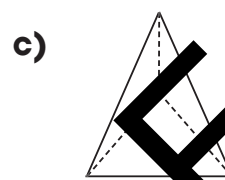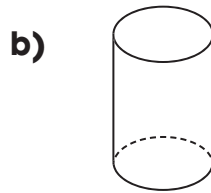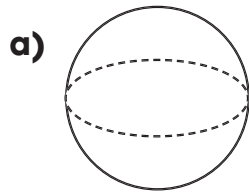
Types of Faces

15) The sides of a geometric solid are called faces.

List the faces shown on each geometric solid.

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

g) _____

h) _____

SAMPLE
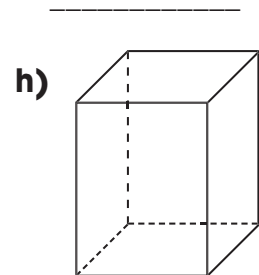
Read each description. Write the name of its matching solid shape.

i) I have two faces that are circles.

j) All six of my faces are squares.

k) I have four triangular faces.

l) I have no flat faces.

m) I have one circular face.

n) I have four triangular faces and one square face.

21