

# Process Standards Rubric

## Algebra

Expectations	Exercise														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GOAL 1: Problem Solving	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 2: Reasoning & Proof	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 3: Communication	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 4: Connections	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GOAL 5: Representation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Instructional programs from pre-kindergarten through grade 12 should enable all students to:															
• 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.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
• 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.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
• 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.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
• 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.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
• 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.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Review A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drill Sheet 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drill Sheet 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

SAMPLE



# Task Sheet 10

## What's the Meaning of this?

10a) If Joanne can buy  $C$  chocolate bars at  $.80¢$  each and  $B$  butter tarts at  $.50¢$  each, what is the meaning of:

(Show your work.)



i)  $C + B$

ii)  $25C$

iii)  $20B$

iv)  $25C + 20B$

b) If Joanne buys  $D$  donuts at  $.10¢$  each and  $P$  potato chips at  $.75¢$  per bag, what is the meaning of:

i)  $2D + 4P$

ii)  $17P$

iii)  $D/2$

iv)  $12D + 10P$

### Reflection



If  $x = 1.20$  and  $y = 1.40$ , predict which of the following equations would equal the highest and lowest values.

i)  $5x + 5y$

ii)  $10x$

iii)  $10y$

iv)  $xy$

Now, solve each equation to see if you were right.

NAME: \_\_\_\_\_



# Drill Sheet 2

a) Simplify fully:  $-4x(3 - 2x) + x^2$



Show Your Work

Answer: \_\_\_\_\_

b) Solve these equations:

i)  $5 - (-a) = 10$

ii)  $12 + g = 24$

iii)  $t + 6.5 = 4.5 - 2.5$

iv)  $5x + 3 + 2x = 16$

c) The following pattern increases by this rule: multiply the previous term by 4 and add 1.

19, 77, 309, 1237, \_\_\_\_

What is the next term in the sequence?

Answer: \_\_\_\_\_

d) If  $\square = 3$ , what is the value of  $21 - (5 \times \square)$ ?



Show Your Work

Answer: \_\_\_\_\_

# Term Value and Graphing



- a) A pattern that increases when the same amount is added to each term is represented in the table below. Complete the pattern.

Term Number	Term Value
1	
2	
3	
4	
5	

- b) A pattern that decreases when the same amount is subtracted to each term is represented in the table below. Complete the pattern.

Term Number	Term Value
1	
2	
3	
4	
5	

- c) Graph the following on the accompanying number line.

