Process Standards Rubric

Algebra

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

NAME: _____

Task Sheet 1

1) Jason gets a summer job cutting grass for a company called, **The Lawn-Care Buds**. The company pays Jason a flat rate for each day he works for them, as well as a certain amount for each lawn cut.

His total pay (in dollars) for the day is represented by **P**; the number of lawns he cuts is represented by **g**.

His total earnings for a given day is expressed with the formula:
P = 6g + 40

a) On Jason's first day of work, he cuts 6 lawns. Use the formula to calculate his total pay.

Show Your Work

Answer: _____

b) Complete the following chart to find out how much Jason makes for the remainder of his first work week.

Number of lawns cut	Total pay ($)
Tuesday = 4	
Wednesday = 7	
Thursday = 0 (it rained)	
Friday = 9	
Saturday = 2 (rained in the morning)	

NAME: _____

Review Sheet

Review B

a) Ike's school decides to hold a carwash fundraiser for their school trip. The school spends $40 for all the equipment needed for the carwash. They end up paying $3 for water/supplies for each car they wash. They charge $6 for each car washed. The formula used to calculate their earnings is **E = 6x – (3x + 40)** where **E** = Earnings and **x** = cars.

Calculate their profit if they wash 50 cars:

Show Your Work

Answer: _____

b) **On the number line below graph the solution to x**

-2x = -6

c) **Solve these equations showing your work:**

i) 3x + 7 = 19

ii) 17 – x = 4

d) **Simplify the following equation:**

$4x^2 - 2x + 6 + 3x - x^2$

Equations and Plotting

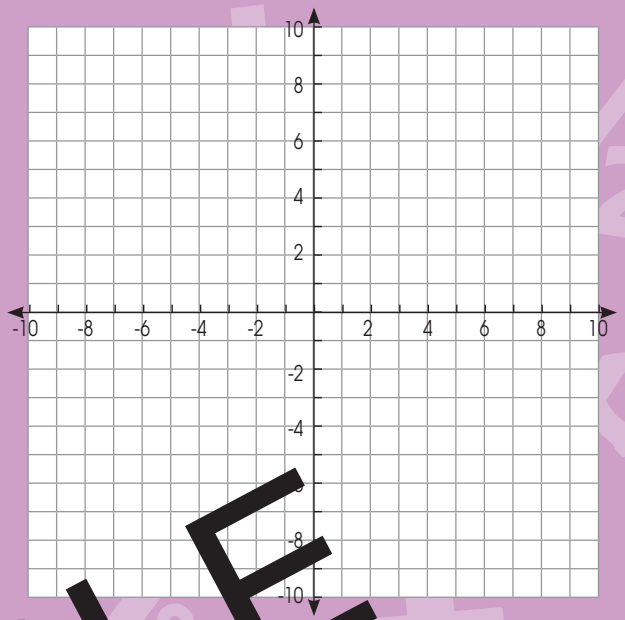
a) **Plot the following coordinates on the accompanying chart:**

A =

B =

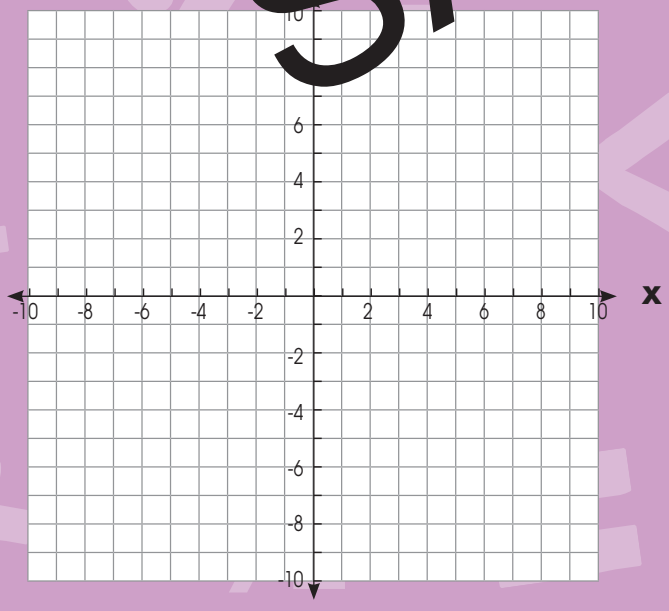
C =

D =



b) **Complete the chart below using the equation y = 2x + 3.**

x	-4	-3	-2	-1	0	1	2
y							



c) **Now, plot the coordinates from the chart above on the graph below, then draw a straight line through the coordinates.**