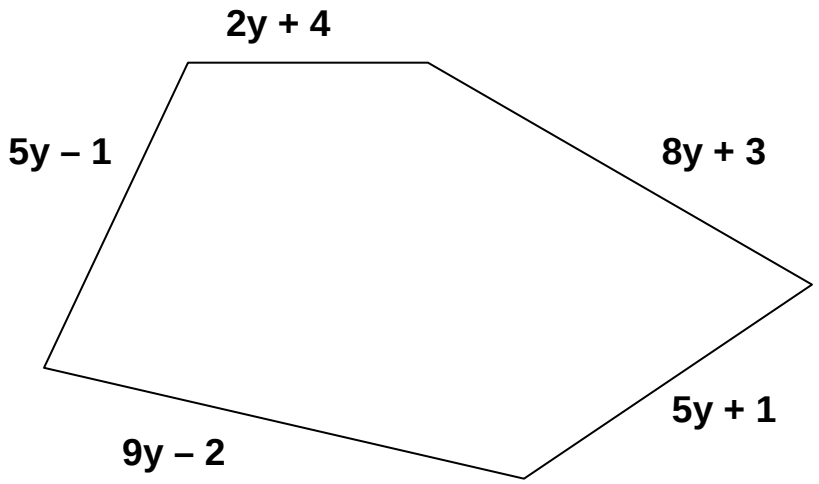
PROBLEM-OF-THE-DAY: ALGEBRA 1

WEEK: February 11 to February 14 **Day:** Monday

RISD Objective: Given a problem which calls for operations with polynomials, students will add, subtract, multiply, or factor the polynomial according to the context of the problem.

PROBLEM #101

Veronica has been asked to find a simplified expression which represents the perimeter of the polygon below, but she is having difficulty. Veronica asks for your help. Please write instructions to Veronica on how to work this problem. In addition to instructions, show the work and correct answer.



MODEL SOLUTION #101

Veronica, to find the perimeter of a polygon, you must add up the lengths of every side. In this case, the side lengths are all binomial expressions, so you must add them by combining like terms. Here is my work for the problem:

(2y + 4) + (8y + 3) + (5y + 1) + (9y – 2) + (5y – 1)
(2y + 8y + 5y + 9y + 5y) + (4 + 3 + 1 – 2 – 1)
29y + 5

So, the simplified expression that represents the perimeter of this polygon is:

29y + 5.