

2.A Operations

The teacher had just returned the math test, and no one was looking very happy. Martin had missed *all* the problems.

Test

Name: *Martin P.*

Operations

1. $2^3 = 6$
2. $3x + x = 3x^2$
3. $2x^3 - x^2 = x$
4. $5 - 2x = 3x$
5. $4 - 2 \cdot 6x = 12x$
6. $(2x - 3) - (x - 2) = x + 5$
7. $6x - (x^2 - 4x) = 2x - x^2$
8. $-(y^2 - x^2) = -y^2 - x^2$
9. $(2x + 1)(3x - 5) = 6x^2 - 5$
10. $2x(-y + 5) = 2x - y + 5$
11. $2y + 3x = 5xy$
12. $6 - 2(x + 3) = 4x + 12$

Then the teacher did an unusual thing. He handed out these instructions:

Free Points!

You can get extra points on the **Operations** test if you can correct your mistakes. This is what you need to do:

- a. For each problem, explain your mistake. Try to figure out what you were thinking. Most of your mistakes have to do with operations.
- b. Show me you now know how to do the problem correctly. Use sketches of the Lab Gear or explain a rule you have learned. Don't just give me the answer.
- c. Finally, write the correct answer to the problem.

What should Martin write to get his free points? Write out the corrections for him.

"I hate math tests," Martin groaned. "I'd rather have my teeth pulled out." Mary would not show her test to anyone, but she looked miserable, too. "I'll need a brain transplant to pass this course," she moaned. Lew, the math whiz, grimaced at his test score and glared at his crutches. He was used to getting everything right, but he had just had an operation on his knee after an injury on the playing field. Math had been the last thing on his mind when he took the test.