**Lesson 8: Assessment**

*For each of the following questions, please solve or circle your answer from the given choices. Below the question, please show all the steps you used to find the answer. Then, explain why your answer is correct or why the other answers are wrong.*

**Problem One:**

Josh and Amy are multiplying 6000 integers together. Of those 6000 integers, 3528 numbers are positive integers and the rest are negative numbers. Josh claims that the product of those 6000 integers should be positive. Amy thinks that the product should be negative. Who is right?

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Two:**

The usual number of hours of sleep that I get (or at least that I try to get) is given by this expression: . Let a = 4, b = -10, and c = 1. Evaluate the expression to find the usual number of hours of sleep I get.

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Three:**

Winter lasts for a while at Columbia University. In early March, the temperature dropped by about ten degrees. However, by April, the blossoms are blooming, and the temperature has risen seven degrees. Unfortunately, the April winds lowered the temperature by two degrees. From early March, what is the net change in temperature? Be sure to include the sign.

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Four:**

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Five:**

The number of whiteboard markers I have is twice the number of erasers Laura has. The number of erasers Laura has is two more than the number of tissues that Josh has. The number of tissues that Josh has is one less than the number of whiteboards that Amy has. And the number of whiteboards that Amy has is half the number of worksheets that Priyanka has. Let’s say that Priyanka has *w* worksheets. How many whiteboard markers do I have? Express the answer using an algebraic expression in terms of *w*.

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Six:**

A few days ago, I brought a pack of Trader Joe’s Sour Gummies to the faculty room to share with the Teaching Fellows. The pack had 30 gummies but then I gave away the gummies to 5 Teaching Fellows. Assuming each Teaching Fellow got the same number of gummies, what is the net gain or loss of gummies? Express the answer as a signed integer.

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

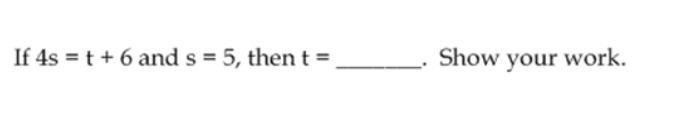
**Problem Seven:**

Simplify [3 + 22(1+8)]∕(22+32)

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Eight:**

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**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Nine:**

Evaluate and simplify when x = 2 and y = -2

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Ten:**

I decided to add ten numbers. All those numbers are whole numbers. Could the sum of those numbers be negative? Could the sum be zero? Could the sum be positive? Explain.

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**

**Problem Eleven:**

Josh decided to multiply 30 integers together to figure out a problem. He noticed that 15 of those integers are positive and 14 of them are negative. However, the remaining integer is neither positive nor negative. He claims that the answer should be non-positive and non-negative. On the other hand, Jack claims that the answer should be positive because there is even number of negative numbers multiplied, so the negatives should cancel out. Who’s right?

**Steps to get your answer:**

**Justify/explain why your answer is correct or makes sense:**