

# S2: Question 3

## Six Point Problem Solving

**Context:** We are going to evaluate a Numerical Expression that includes Exponents

**Observations:** Within the problem we see Symbols that represent division/fraction, since a symbol that represents a number to be negative. We also see parenthesis and Exponents.

**Conclusion:** In conclusion after taking all the correct steps and evaluating everything correctly your final answer should be

$$\left(\frac{-4^3}{-2^3}\right)^2 \Rightarrow \left(\frac{-64}{-8}\right)^2$$

$$-4 \cdot -4 \cdot -4 = -64$$

$$-2 \cdot -2 \cdot -2 = -8$$

$$\boxed{64}$$

$$8^2 = 8 \cdot 8 = 64$$

**Questions:** <sup>1</sup> What would the first step toward solving this equation?

<sup>2</sup> What would come first Evaluating the exponent or whats in the parenthesis?

<sup>3</sup> Does pemdas still apply within parenthesis?

**Strategies:** Firstly you have to take a good look at the problem with the order of operations in mind:

- Evaluate whats within the parenthesis and determine the Product.
- After evaluating multiply the product by itself.

**Concepts:** In order to understand this problem you must have a understanding of P.E.M.D.A.S, Exponents, Negative Numbers, and fractions/Division