

1) Answer: C

Explanation: Substituting the values of x , y , and z to the given algebraic expression:

$$2x^2y - 3xy + z$$

$$2(1)^2(2) - 3(1)(2) + (-1)$$

$$4 - 6 - 1$$

$$-2 - 1$$

$$-3$$

$$\text{Substituting } x = 1, y = 2, \text{ and } z = -1$$

The answer is -3

2. Answer: D

Explanation: Let us translate the “the sum of a number and one-fourth of it” in symbols:

The keyword “sum” refers to the addition of two quantities which, in this case, are a number and one-fourth of it. We represent the number using x and the one-fourth of that number using $\frac{1}{4}x$

Their sum is $x + \frac{1}{4}x$

3. Answer: D

Explanation: The expression $\frac{3x}{2}$ tells us that two quantities are involved in a division process.

These quantities are $3x$ and 2 . Therefore, we can state that the expression $\frac{3x}{2}$ indicates the ratio of $3x$ to 2 . $3x$ means thrice a number. Thus, the correct translation is “the ratio of thrice a number to 2”.

4. Answer: A

Explanation:

Substituting the value of a in the given expression:

$$\frac{a}{3} - a^2$$

$$\frac{1}{3} - (1)^2$$

$$\text{Substituting } a = 1$$



Answer Key

Algebraic Expressions

$$\frac{1}{3} - 1$$

$$\frac{1}{3} - \frac{3}{3} = -\frac{2}{3}$$

We express 1 as a fraction with 3 as a denominator .
Recall that $\frac{3}{3} = 1$ (when the numerator and the denominator of a fraction are the same, the fraction is equal to 1)

Thus, the answer is $-\frac{2}{3}$

5) Answer: C

Explanation: “The sum of two numbers” can be represented by $x + y$. The term “at least” means greater than or equal. Therefore, the answer is $x + y \geq 5$



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