DELHI PUBLIC SCHOOL, JAMMU
SESSION 2024-25
Assignment-3

Class: VIII   **Subject: Maths**

Topic: Algerbraic Expressions

Read the instructions carefully and answer the following questions.

<u>Assertion and Reason Based Questions</u>

This type of reasoning questions consists of two statements; an assertion (statement of fact) and a reason (explanation for the assertion). You have to determine whether each statement is correct. If both the statements are correct, you have to determine whether the reason supports the assertion. There will be four answer choices for the possible outcomes and you have to select the correct one.

1.) Assertion (A)–The expression x + 3 is in one variable.
    Reasons (R) –The expression (n+3) represents the measure of an exterior angle of a regular Decagon.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.
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2.) Assertion (A) –The expression 4xy + 7 is in two variables
    Reasons (R) –There are two variables x and y.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.

3). Assertion (A) –The value of 5x when x = 5 is 5
    Reasons (R) – A numerical coefficient is defined as a fixed number that is multiplied to a variable.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false.
d) A is false but R is true.

4. Subtract:
(i) -5xy from 12xy
(ii) $2a^2$ from $-7a^2$

5. Write down the product of $-8x^2y^6$ and -20xy and evaluate the product for x = 2.5, y = 1
6. Simplify: x (x+4) + 3x (2x^2 -1) + 4x^2 + 4
7. Find the product of $(a^2b + 2a)$ and $(a^4 + 5b - 1)$

8. **Case Study Based Question**

A playground is in shape of a square. The area of the square PQRS is 256 m^2 with each side $(x + 2)m$. One day Suraj along with his two friends, Ajay and Aman went to play there with bicycle. Someone stole Suraj bicycle, but Ajay and Aman helped him by contributing ₹$(4a + 60)$ and ₹$(6a + 10)$ respectively, to buy a new bicycle. The cost of bicycle was ₹4200.
On basis of this information given in passage answer following questions.
(i) Find the value of x.
(a) 16   (b) 18   (c) 14   (d) 12
(i) Find the side of square shaped ground?
(a) 19   (b) 12   (c) 18   (d) 16
(i) What is the value of a?
(a) 410   (b) 403   (c) 413   (d) None of these
(iv)What was the amount given by Ajay and Aman to Suraj?
(a)4130 b) 4200   c) 4100   d) None of these