

DELHI PUBLIC SCHOOL, JAMMU
SESSION 2024-25
Assignment-4

Class: VII

Subject: Maths

Topic: Algebraic Expressions and Comparing Quantities

Read the instructions carefully and answer the following questions.

Assertion and Reason Based Questions

In the following questions, two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a),(b),(c) and (d) as given below.

- (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.

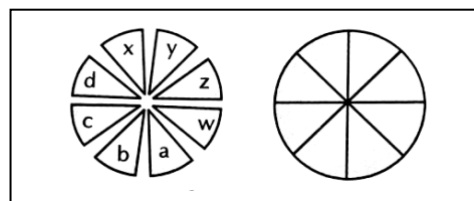
- 1) **Assertion (A)** – The degree of the polynomial $\frac{2}{3}p^3q - 7p^2q^3 + p^3q^2 - 11pq$ is 4.
Reasons (R) – The highest power of the variable in a polynomial is called its degree.
- 2) **Assertion (A)** – The coefficient of x^2 in $-\frac{5}{7}x^3y^2$ is $-\frac{5}{7}xy^2$.
Reasons (R) – The product of all the factors except for a specified factor in an expression is the coefficient of that specified factor.
- 3). **Assertion (A)** – The ratio 3:12 is equal to 25%.
Reasons (R) – To convert a ratio into a percentage, first convert the ratio into a fraction and then divide by 100.
4. Represent $2x^2y - 5x + 6$ by a tree diagram indicating terms and factors.
5. ₹ 6050 is borrowed at 6.5% rate of interest p.a. Find the interest and the amount to be paid at the end of 3 years?
6. Rohan bought 20 pairs of shoes at ₹ 300 per pair. He sold 15 pairs at ₹ 350 per pair and the remaining at ₹ 280 per pair. Find his net gain or loss percent.
7. From the sum of $2x^2 + 3xy - 5$ and $7 + 2xy - x^2$ subtract $3xy + x^2 - 2$. Also find the value of the so obtained polynomial for $x = -1$ and $y = 2$

8. Case Study Based Question

In figure, just as $a + b + c + d + x + y + z + w = \text{Whole} = 1$
Similarly, all the parts that form the whole when added together gives the whole or 100%. So, if we are given one part, we can always find out the other part. Suppose 30% of a given number of students are boys this means that if there are hundred students 30 out of them would be boys and the remaining would be girls.

On basis of this information given in passage answer following questions.

- (i) $70\% = \underline{\hspace{2cm}}\% - 30\%$



- (a) 40 (b) 100 (c) 30 (d) 70
- (ii) In the adjoining figure, what percentage of the figure is represented by $(a + b + c + d)$?
- (a) 40% (b) 60% (c) 20% (d) 50%
- (iii) In a class of 40 students, 25% are absent, how many students are present in the class?
- (a) 30 (b) 10 (c) 25 (d) None of these
- (iv) In an examination, Seema scored 450 marks. If he scored 75% marks, what was the maximum marks?
- (a) 500 (b) 800 (c) 600 (d) None of these