

: ASSERTION-REASON BASED QUESTIONS:

In all the questions mentioned below (Q1-Q10) a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:

- (a) Both Assertion (A) and Reason (R) is true and Reason (R) is the correct explanation of the Assertion (A).
- (b) Both Assertion (A) and Reason (R) is true and Reason (R) is the correct explanation of the Assertion (A).
- (c) Assertion (A) is true, but Reason (R) is false.
- (d) Assertion (A) is false, but Reason (R) is true.

Q1. Assertion (A): Perimeter of parallelogram can be derived using perimeter of rectangle.

Reason (R): Rectangle is a special type of parallelogram in which measure of one interior angle is 90°

Q2. Assertion (A): If the measure of an exterior angle of a triangle is 130° , then measure of its adjacent interior angle is 50° .

Reason (R): The sum of the two angles forming linear pair is 180° .

Q3. Assertion (A): For equilateral triangle, medians are also the angle bisectors of the interior angles of the triangle.

Reason (R): The orthocentre of an equilateral triangle coincide with its incentre.

Q4. Assertion (A): $\frac{-5}{7}$ and $\frac{105}{-147}$ are representing the same rational number.

Reason (R): If we multiply both the numerator and denominator of a rational number by same integer, we get equivalent rational number of the initial.

Q5. Assertion (A): Sum of the two expressions $(4x^2 - 3y + 4z)$ and

$(-5x + 6y - 13z)$ is $(-x^2 + 3y - 9z)$

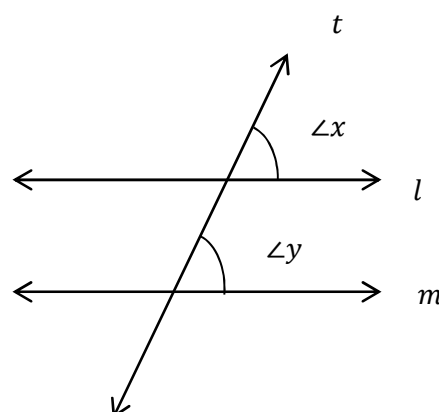
Reason (R): In time of addition of two expressions, we can only add the like terms and the unlike terms are placed as it is in the sum.

Q6. Assertion (A): In an arranged data, 8th term is the median of the data. Then the data contains total 14 observations.

Reason (R): If an arranged data contains N observations, where N is an odd number, then $\left(\frac{N+1}{2}\right)$ th term is the median term.

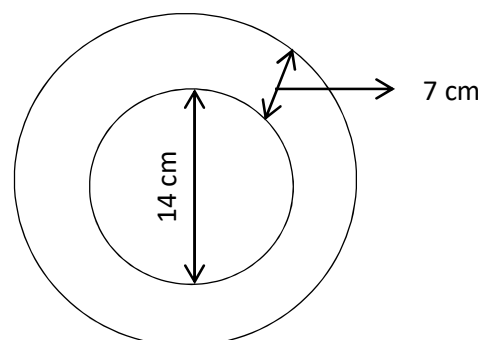
Q7. Assertion (A): In the adjoining figure, two lines named l and m are intersected by a transversal t .

If $\angle x = \angle y$, then $l \parallel m$.



Reason (R): If a pair of alternate interior angles formed when a transversal cuts two lines at two separate points, becomes equal in measure, then the two lines will be parallel to each other.

Q8. Assertion (A): In the adjoining figure, a circular ring of width 7 cm has perimeter equal to 110 cm. ($\pi = \frac{22}{7}$)



Reason (R): The circumference of a circle with radius r unit is $2\pi r$ unit.

Q9. Assertion (A): Pratik deposited Rs. 12000 in bank with a plan that after 5 years he will get Rs. 17100. But due to some personal issues, he has to withdraw the money after 3 years. He got Rs. 14,592 from the bank.

Reason (R): The bank gave Pratik less rate of interest for withdrawal of the money before the end of time period according to the plan.

Q10. Assertion (A): If C. P. : S. P. = 5: 6 gives profit of 20%

Then, C. P. : S. P. = 6: 5 will give loss of 20%

Reason (R): Profit or loss percentage = $\left(\frac{\text{Profit or loss}}{\text{Cost Price}} \times 100\right)$