

- Assertion (A):** The length and breadth of a rectangular field are $(3b+7ac)$ cm and $(3b-7ac)$ cm respectively. Then the area of the field is $(9b^2 - 49a^2c^2)$ cm².
Reason (R): $(a + b) \times (a - b) = a^2 - b^2$.
- Assertion (A):** $(4a + 9b) \times (4a - 9b) = 16a^2 - 81b^2$.
Reason(R): The product of two binomials is always a binomial.
- Assertion (A):** The area of a square park is $(9x^2 - 56xy + 16y^2)$ m², then each side of the Park is $(3x+4y)$ m.
Reason(R): Area of a square = $(\text{side})^2$.
- Assertion (A):** If $2x + \frac{1}{2x} = 9$, then $4x^2 + \frac{1}{4x^2} = 81$.
Reason(R): $(a - b)^2 = a^2 - 2ab + b^2$.
- Assertion (A):** $x^{-3} + \frac{1}{x} + 5x - 7$ is a polynomial.
Reason(R): Every polynomial is an algebraic expression.
- A playground is in shape of a square whose area is 256 m² with each side $(5x - 4)$ m. One day Raj along with his two friends Ajay and Aman went to play there with bicycle. Someone stole Raj's 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:

- Find the value of x .
- What are the algebraic expression of the area of the ground and the total cost of the bicycle?
- What is the value of a ?
- What was the amount given by Ajay and Aman to Raj?
- What is the perimeter of the playground in terms of x ?



- A young boy named Aditya visited a wildlife sanctuary on a school field trip. Aditya was excited to see a variety of animals up close. Outside each animal's enclosure, he noticed that the weight of the animals was written on small boards:
 - an Elephant 6350 kg, b) a Giraffe 2646 kg, c) a Tiger 289 kg, d) a Parrot 22.7 g, e) a Sparrow 16 g.



On the basis of above information, answer the following questions.

- Find the weight of an Elephant in standard form.
- Find the total weight of a Parrot and a Sparrow.
- If the weight of a Parrot is $(a \times 10^{-2})$ kg, then find the value of a .