

WELCOME CLASS 10TH (ARTS)

Algebraic Formulas and Applications

We are going to start our Online class today. I hope we all will enjoy and learn.

Rules for class:

- 1) Be on time for all your classes.
- 2) Respect all the participants of the class.
- 3) Do not create any disturbance.
- 4) Pay attention to your teacher.
- 5) Raise hand if you have a question.
- 6) Enter the class with your actual name so that your attendance can be marked.
- 7) Ask any question relevant to topic taught only.
- 8) If any student question is not answered due to much participant don't mind please.



Students will be able to: Find the value of the Algebraic Expression

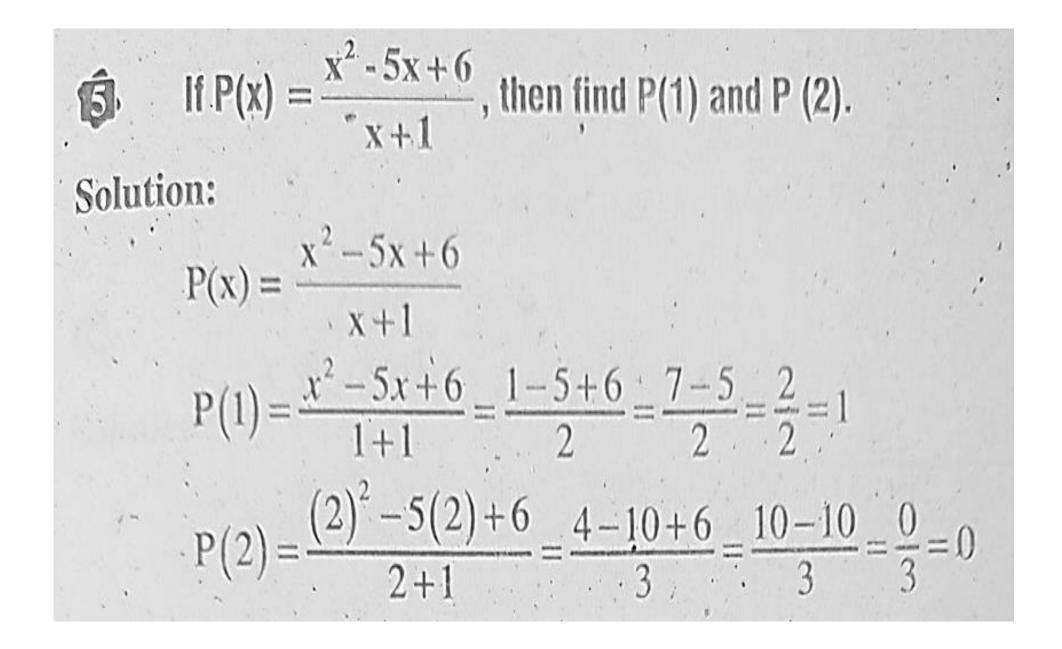
1.1.8 Value of an Algebraic Expression

If we put a real number against a variable "x" in a polynomial P(x), we get a real number. This real number is called value of P(x). For $x = a, a \in R, P(x)$ will have the value P(a).

For example:

If $P(x) = 4x^3 + 3x^2 + 5x + 1$, then find P(x), for (i) x = 1,(ii) x = 2. $P(x) = 4x^3 + 3x^2 + 5x + 1$ (i) $P(1) = 4(1)^3 + 3(1)^2 + 5(1) + 1$ =4+3+5+1= 13Thus P(1) = 13 and (ii) $P(2) = 4(2)^3 + 3(2)^2 + 5(2) + 1$ =32+12+10+1=55Thus P(2) = 55

Solve: If $P(x) = x^4 + 3x^2 - 5x + 9$, then find P(x), for x = 0, x = 1. Solution: $= x^{4} + 3x^{2} - 5x + 9$ P(x)P(0) = $(0)^4 + 3(0)^2 - 5(0) + 9$ = 0 + 0 - 0 + 9 = 9 $=(1)^{4} + 3(1)^{2} - 5(1) + 9$ P(1) =1+3-5+9=8





Solve

If $P(x) = 2x^3 + 2x^2 + x - 1$, then find P(-2)

Solution

$$P(-2) = 2(-2)^{3} + 2(-2)^{2} + (-2) - 1$$

$$P(-2) = 2(-8) + 2(4) - 2 - 1$$

$$P(-2) = -16 + 8 - 2 - 1$$

$$P(-2) = -11$$



Ex 1.1 Q4, 6