[CLASS-10^{th} REVISION OF CH:-2 (POLYNOMIALS)]

Objective Questions

-: Multiple Choice Questions :-

1.) A polynomial of degree 0 (zero) is called ?

(a) A linear polynomial (b) Quadratic polynomial

(c) Cubic polynomial (d) Constant polynomial

Ans. (d) Constant polynomial.

Hint :-[A polynomial $p(x)$ of degree 0 (zero) is called a Constant polynomial and $p(x)$ is of form kx^0.]

for example :- $p(x) = 10 = 10x^0$ is a constant polynomial.

2.) A polynomial of degree 1 (one) is called ?

(a) A linear polynomial (b) Quadratic polynomial

(c) Cubic polynomial (d) Constant polynomial

Ans. (a) A linear polynomial.

Hint :-[A polynomial $p(x)$ of degree 1 (one) is called a linear polynomial and $p(x)$ is of form $ax + b$, where a, b are real numbers and $a \neq 0$.]

for example :- $p(x) = 2x - 3,\ \sqrt{3}x + 5,\ y + \sqrt{2},\ x - \frac{2}{11}$ etc.

3.) A polynomial of degree 2 (two) is called ?

(a) A linear polynomial (b) Quadratic polynomial

(c) Cubic polynomial (d) None of these

Ans. (b) Quadratic polynomial.

Hint :-[A polynomial $p(x)$ of degree 2 (two) is called a quadratic polynomial and more generally any quadratic polynomial in $p(x)$ is of form $ax^2 + bx + c$, where a, b, c are real numbers and $a \neq 0$.]

for example :- $p(x) = 3x^2 + 2x - 3,\ y^2 + 5,\ y + \sqrt{2},$
$2 - x^2 + \sqrt{3}x,\ 4z^2 + \frac{1}{7}$ etc.

4.) A polynomial of degree 3 (three) is called ?

(a) A linear polynomial (b) Quadratic polynomial

(c) Cubic polynomial (d) None of these.

Ans. (c) Cubic polynomial.

Hint :-[A polynomial $p(x)$ of degree 3 (three) is called a cubic polynomial and most general any cubic polynomial in $p(x)$ is of form $ax^3 + bx^2 + cx + d$, where a, b, c, d are real numbers and $a \neq 0$.] for example :- $p(x) = x^3 - 8, 4x^3 + 3x^2 + 2x - 1$, etc.]

5.) What is the number of zeroes of a zero polynomial ?

(a) 1 (b) 2 (c) 0 (d) Infinite

Ans. (d) Infinite

[Hint] :- Zeroes of a polynomial can be defined as the points where the polynomial becomes zero on the whole. A polynomial having value zero is called zero polynomial of the form $p(x) = 0$. Any value of x can be a zero of a polynomial. The number of zeroes of a zero polynomial = (Infinite) for example :- $p(x) = 0$]

6.) A non-zero constant polynomial has ..... zeroes.

(a) No (b) 2 (c) 3 (d) 1

Ans. (a) No

7.) How many zeroes are there in a linear polynomial ?

(a) 1 (b) 2 (c) 0 (d) Infinite

Ans. (a) 1

8.) What is the number of zeroes of a quadratic polynomial ?

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (b) 2

9.) What is the maximum number of zeroes of a quadratic polynomial ?

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (b) 2

[Hint] :- (There are at most 2 zeroes of a quadratic polynomial.)

10.) A quadratic polynomial has ..... real zeroes.

(a) 2 (b) At least 2 (c) 3 (d) At most 2

Ans. (d) At most 2

11.) What is the maximum number of zeroes of a polynomial $ax^2 + bx + c$ where $a \neq 0$ is :

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (b) 2

[Hint] :- (There are at most 2 zeroes of a quadratic polynomial.)

12.) The number of zeroes of the polynomial $p(x) = x^2 - 2x - 8$ is :

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (b) 2

13.) What is the number of zeroes of a cubic polynomial ?

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (c) 3

14.) How many zeroes can a polynomial of degree $'n'$ can have at most ?

(a) n (b) n^2 (c) $n^2 - 1$ (d) $n^2 + 1$

Ans. (a) n

15.) In the polynomial of $p(x) = 10$ what is the degree of polynomial ?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (d) 0 (Zero)

16.) In the polynomial of $p(x) = 4x + 2$, what is the degree of polynomial ?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (a) 1 (One)

17.) What is the degree (Power/exponent) of polynomial $2y^2 - 3y + 4$?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (b) 2 (Two)

18.) What is the degree of Polynomial $p(x) = 2x^3 - 3x^2 + 4$?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (c) 3 (Three)

19.) If α and β are the zeroes of the quadratic polynomial $ax^2 + bx + c$, then $\alpha + \beta =$?

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $\frac{a}{b}$

Ans. (a) $\frac{-b}{a}$

20.) If α and β are the zeroes of the quadratic polynomial $3x^2 - 5x + 2$, then $\alpha + \beta = ?$

(a) $\frac{-2}{3}$ (b) $\frac{5}{3}$ (c) $\frac{-5}{3}$ (d) $\frac{2}{3}$

Ans. (b) $\frac{5}{3}$

Hint :- We have, quadratic polynomial $3x^2 - 5x + 2$, Here, $a = 3, b = -5$

$$\therefore \alpha + \beta = \frac{-b}{a} = \frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2} = \frac{-(-5)}{3} = \frac{5}{3}$$

21.) Sum of the zeroes of the quadratic polynomial is :

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $\frac{a}{b}$

Ans. (a) $\frac{-b}{a}$

22.) Sum of the zeroes of the quadratic polynomial is :

(a) $\frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2}$ (b) $\frac{-(\text{Constant term})}{\text{Coefficient of } x^2}$

(c) $\frac{(\text{Coefficient of } x)}{\text{Coefficient of } x^2}$ (d) $\frac{\text{Constant term}}{\text{Coefficient of } x^2}$

Ans. (a) $\frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2}$

23.) Sum of the zeroes of the quadratic polynomial $2x^2 - 8x + 6$ is :

(a) 1 (b) 2 (c) 3 (d) 4

Ans. (d) 4

Hint :- We have, quadratic polynomial $2x^2 - 8x + 6$. Here, $a = 2, b = -8$

$$\therefore \text{Sum of the zeroes} = \frac{-b}{a} = \frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2} = \frac{-(-8)}{2} = \frac{8}{2} = 4$$

24.) Sum of the zeroes of the quadratic polynomial $2x^2 + 6$ is :

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (d) 0

Hint :- We have, quadratic polynomial $2x^2 + 6 \Rightarrow 2x^2 + 0x + 6$

Here, $a = 2, b = 0$

$$\therefore \text{Sum of the zeroes} = \frac{-b}{a} = \frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2} = \frac{-(0)}{2} = 0$$

25.) If α and β are the zeroes of the quadratic polynomial $ax^2 + bx + c$, then $\alpha\beta = ?$

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $\frac{a}{b}$

Ans. (c) $\frac{c}{a}$

26.) If α and β are the zeroes of the quadratic polynomial $3x^2 - 5x + 2$, then $\alpha\beta = ?$

(a) $\frac{-2}{3}$ (b) $\frac{5}{3}$ (c) $\frac{-5}{3}$ (d) $\frac{2}{3}$

Ans. (d) $\frac{2}{3}$

Hint :- We have, quadratic polynomial $3x^2 - 5x + 2$,

Here, $a = 3, b = -5, c = 2$

$$\therefore \alpha\beta = \frac{c}{a} = \frac{\text{Constant term}}{\text{Coefficient of } x^2} = \frac{2}{3}$$

27.) Product of the zeroes of the quadratic polynomial is :

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $\frac{a}{b}$

Ans. (c) $\frac{c}{a}$

28.) Product of the zeroes of the quadratic polynomial is :

(a) $\frac{-(\text{Coefficient of } x)}{\text{Coefficient of } x^2}$ (b) $\frac{-(\text{Constant term})}{\text{Coefficient of } x^2}$

(c) $\frac{(\text{Coefficient of } x)}{\text{Coefficient of } x^2}$ (d) $\frac{\text{Constant term}}{\text{Coefficient of } x^2}$

Ans. (d) $\frac{\text{Constant term}}{\text{Coefficient of } x^2}$

29.) Product of the zeroes of the quadratic polynomial $x^2 + 7x + 10$ is :

(a) 10 (b) 7 (c) 1 (d) 4

Ans. (a) 10

Hint :- We have, quadratic polynomial $x^2 + 7x + 10$

Here, $a = 1,\ b = 7,\ c = 10$

$$\therefore \text{Product of the zeroes} = \frac{c}{a} = \frac{\text{Constant term}}{\text{Coefficient of } x^2} = \frac{10}{1} = 10$$

30.) Product of the zeroes of the quadratic polynomial $3x^2 - 2x - 1$ is :

(a) $\frac{-2}{3}$ (b) $\frac{1}{2}$ (c) $\frac{2}{3}$ (d) $\frac{-1}{3}$

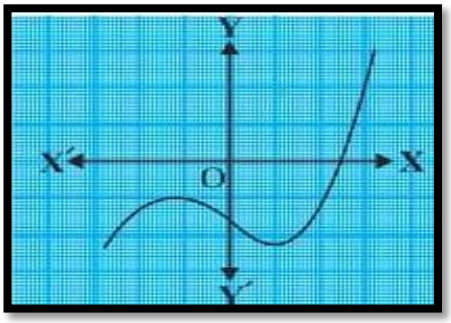
Ans. (d) $\frac{-1}{3}$

Hint :- We have, quadratic polynomial $3x^2 - 2x - 1$

Here, $a = 3, b = -2, c = -1$

$\therefore$ Product of the zeroes $= \frac{c}{a} = \frac{\text{Constant term}}{\text{Coefficient of } x^2} = \frac{-1}{3}$

31.) The graph of $y = p(x)$ is given in fig. below, for some polynomial $p(x)$. The number of zeroes of the polynomial $p(x)$ is

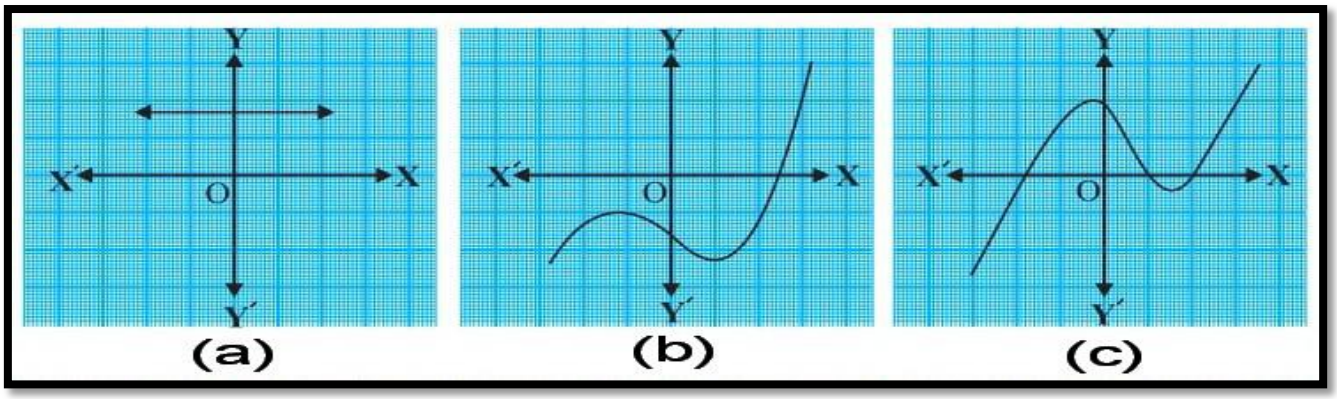


(a) 1 (b) 2 (c) 3 (d) 0

Ans. (a) 1

Hint :- [The graph of $y = p(x)$ Intersects the $x - axis$ at 1 point. So, the number of zeroes for the given graph is 1.]

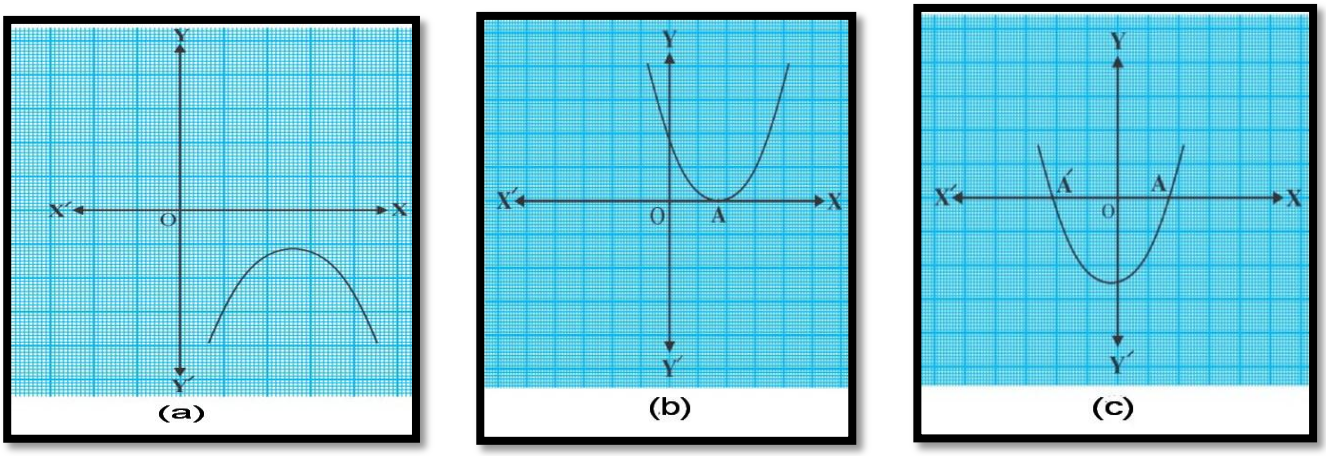
32.) The graph of $y = p(x)$ is given in fig. below, for some polynomial $p(x)$. Which of the following graph shows one zero of the polynomial $p(x)$



Ans. (b) shows one zero.

Hint :- [The graph of (b) showing $y = p(x)$ Intersects the $x - axis$ at 1 point only. So, the number of zeroes for the given graph is 1.]

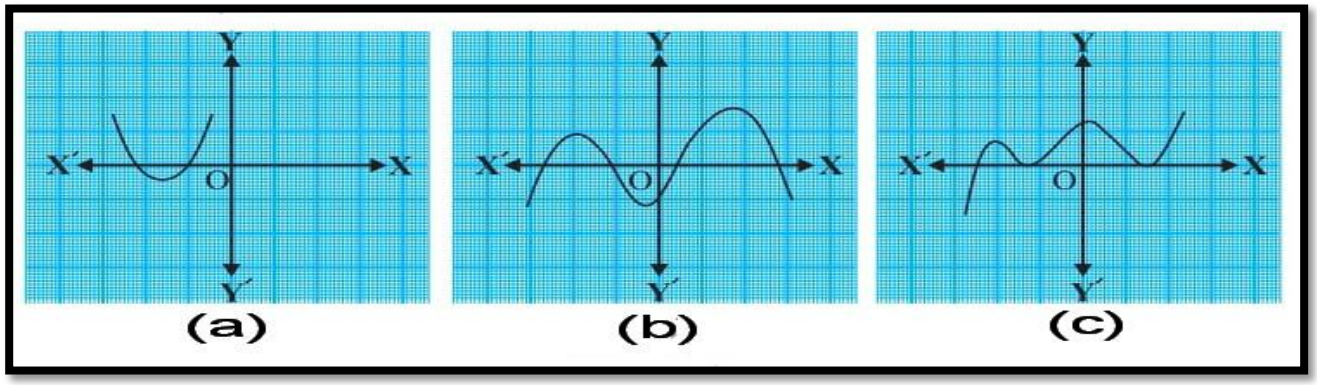
33.) Which of the following graph shows two distinct zeroes of a quadratic Polynomial ?



Ans. (c)

Hint :- [The graph of (c) showing $y = p(x)$ Intersects the $x - axis$ at 2 points. So, the number of zeroes for the given graph is 2.]

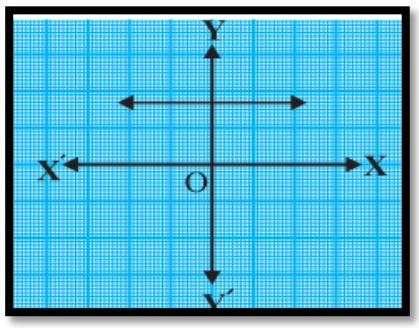
34.) The graph of $y = p(x)$ is given in fig. below, for some polynomial $p(x)$. Which of the following graph shows three zeroes of the polynomial $p(x)$



Ans. (c)

Hint :- [The graph of (c) showing $y = p(x)$ Intersects the $x - axis$ at 3 points. So, the number of zeroes for the given graph is 3.]

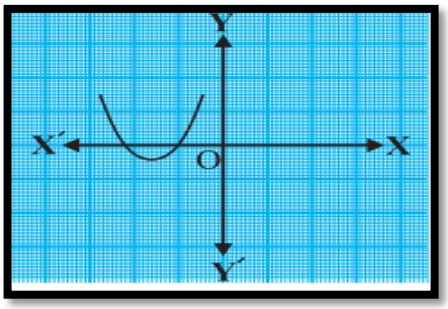
35.) Find the number of zeroes from the graph of the polynomial $p(x)$.



(a) 1 (b) 2 (c) 3 (d) 0

Ans. (d) 0

36.) Find the number of zeroes from the graph of the polynomial $p(x)$.

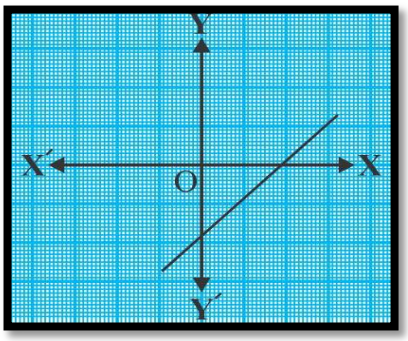


(a) 1 (b) 2 (c) 3 (d) 0

Ans. (b) 2

Hint :- [The graph of $y = p(x)$ Intersects the $x - axis$ at 2 point. So, the number of zeroes for the given graph is 2.]

37.) The graph of $y = p(x)$ is given in fig. below, for some polynomial $p(x)$. The number of zeroes of the polynomial $p(x)$ is (IMPORTANT)



(a) 1 (b) 2 (c) 3 (d) 0

Ans. (a) 1

38.) Which of the following is a Polynomial

(a) $2y^2 - 3y + 4$ (b) $2x^2 + \sqrt{x} + 4$

(c) $4x^3 + 3x^{-2} + 2x - \frac{3}{\sqrt{5}}$ (d) $x^2 + \frac{2}{x} + 4$

Ans. (a) $2y^2 - 3y + 4$

39.) Which of the following is not a Polynomial

(a) $2x^2 + 3x + 4$ (b) $2x^2 + \sqrt{5}x + 4$

(c) $4x^3 + 3x^2 + 2x - \frac{3}{\sqrt{5}}$ (d) $x^2 + \frac{2}{x} + 4$

Ans. (d) $x^2 + \frac{2}{x} + 4$

Hint :- We have, $x^2 + \frac{2}{x} + 4 \Rightarrow x^2 + 2x^{-1} + 4$

Here power of x is -1 in the middle term. Therefore It is not a polynomial.

40.) If α and β are the zeroes of the quadratic polynomial $p(x)$ then $p(x)$ is ?

(a) $x^2 - (\alpha + \beta)x - \alpha.\beta$

(b) $x^2 - (\alpha + \beta)x + \alpha.\beta$

(c) $x^2 - (\alpha - \beta)x + \alpha.\beta$

(d) $x^2 + (\alpha + \beta)x + \alpha.\beta$

Ans. (b) $x^2 - (\alpha + \beta)x + \alpha.\beta$

41.) If α and β are the zeroes of the quadratic polynomial then the polynomial $x^2 - (\ldots\ldots\ldots)x + (\ldots\ldots\ldots)$ is ?

(a) $(\alpha + \beta), (\alpha.\beta)$

(b) $(\alpha - \beta), (\alpha.\beta)$

(c) $(\alpha - \beta), (\alpha + \beta)$

(d) None of these

Ans. (a) $(\alpha + \beta), (\alpha.\beta)$

42.) The sum and the product of the zeroes of the quadratic polynomial $ax^2 + bx + c$ are :

(a) $\frac{b}{a}, \frac{c}{a}$ (b) $\frac{-b}{a}, \frac{c}{a}$ (c) $\frac{c}{a}, \frac{a}{b}$ (d) $\frac{a}{b}, \frac{-b}{a}$

Ans. (b) $\frac{-b}{a}, \frac{c}{a}$

43.) If $p(x) = ax^2 + bx + c$ is a quadratic polynomial then what is the relationship of $\frac{c}{a}$ with the zeroes of $p(x)$?

(a) Sum of zeroes

(b) Product of zeroes

(c) Subtraction of zeroes

(d) None of these

Ans. (b) Product of zeroes

44.) If $p(x) = ax^2 + bx + c$ is a quadratic polynomial then what is the relationship of $\frac{-b}{a}$ with the zeroes of $p(x)$?

(a) Sum of zeroes

(b) Product of zeroes

(c) Subtraction of zeroes

(d) None of these

Ans. (a) Sum of zeroes

45.) What is the number of zeroes of a given polynomial $(x+\sqrt{3})(x-\sqrt{3})$ = is :

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (b) 2

46.) How many number of zeroes will be there for the polynomial $p(x) = (x-2)^2 + 16$?

(a) 0 (b) 2 (c) 3 (d) More than 2

Ans. (a) 0

(Hint) :- The given polynomial $p(x) = (x-2)^2 + 16$

$$p(x) = 0$$

For zeroes, put $p(x) = 0$

$$(x-2)^2 + 16 = 0$$

$$(x-2)^2 = -16$$

Which is not possible, as square root of negative number is imaginary

Hence, The given polynomial $p(x) = (x-2)^2 + 16$ has no zeroes.

47.) The sum and product of the quadratic polynomial $x^2 + px + q$ are 4 and – 3 respectively. Find the value of p and q.

(a) 4 and 3 (b) 4 and -3 (c) -4 and -3 (d) -4 and 3

Ans. (c) -4 and -3

48.) If the zeros a polynomial are $\sqrt{3}$ and $-\sqrt{3}$ what are their product ?

(a) 0 (b) 3 (c) -3 (d) 0

Ans. (c) -3

49.) If the zeroes of a polynomial are $\sqrt{5}$ and $-\sqrt{5}$ what are their sum ?

(a) 0 (b) 5 (c) -5 (d) $5, -5$

Ans. (a) 0

50.) The zeroes of the quadratic polynomial $x^2 + 7x + 10$ are ?

(a) Both positive (b) Both negative (c) One positive one negative

(d) Equal in magnitude, but opposite in signs

Ans. (b) Both negative

Hint :- $x^2 + 7x + 10 = 0 \Rightarrow x^2 + (5x + 2x) + 10 = 0$

$$\Rightarrow x^2 + 5x + 2x + 10 = 0$$

$$\Rightarrow x(x+5) + 2(x+5) = 0$$

$$\Rightarrow (x+5)(x+2) = 0 \quad \Rightarrow x = -5 \text{ or } -2$$

51.) Which of the following is a zero of the polynomial $x^5 - x^3 + 2x - 2$

(a) 1 (b) -2 (c) -1 (d) 2

Ans. (a) 1

52.) What is the zero of a linear polynomial $p(x) = ax + b$ is :

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $\frac{a}{b}$

Ans. (a) $\frac{-b}{a}$

Hint :- We have $p(x) = ax + b = 0$

$$ax = -b$$

$$x = \frac{-b}{a}$$

53.) What is the zero of a linear polynomial $p(x) = 2x + 3$ is :

(a) $\frac{-3}{2}$ (b) $\frac{3}{2}$ (c) $\frac{2}{3}$ (d) $\frac{-3}{2}$

Ans. (a) $\frac{-3}{2}$

Hint :- We have $p(x) = 2x + 3 = 0$

$$2x = -3 \quad \Rightarrow x = \frac{-3}{2}$$

54.) The zero of a quadratic polynomial $p(x) = x^2 - 3$ are ..... and ..... .

(a) $-3, 3$ (b) $\sqrt{3}, -\sqrt{3}$ (c) $3, 3$ (d) $\sqrt{3}, \sqrt{3}$

Ans. (c) $\sqrt{3}, -\sqrt{3}$

Hint $\Rightarrow x^2 - 3 = 0$

$\Rightarrow (x + \sqrt{3})(x - \sqrt{3}) = 0 \quad \Rightarrow -\sqrt{3}, \sqrt{3}$

(OR) $\Rightarrow x^2 - 3 = 0$

$\Rightarrow x^2 = 3$

$\Rightarrow x = \pm\sqrt{3}$

55.) The zero of a quadratic polynomial $p(x) = t^2 - 15$ are ..... and ..... .

(a) $-15, 15$ (b) $\sqrt{15}, -\sqrt{15}$ (c) $15, 15$ (d) $\sqrt{15}, 15$

Ans. (b) $\sqrt{15}, -\sqrt{15}$

Hint $\Rightarrow t^2 - 15 = 0$

$\Rightarrow t^2 = 15$

$\Rightarrow t = \pm\sqrt{15}$

56.) The zero of a quadratic polynomial $p(x) = 4x^2 - 25$ are ..... and ..... .

(a) $2, -5$ (b) $-\frac{5}{2}$ (c) $\frac{5}{2}$ (d) $\pm \frac{5}{2}$

Ans. (d) $\pm \frac{5}{2}$

Hint $\Rightarrow 4x^2 - 25 = 0$

$\Rightarrow 4x^2 = 25$

$\Rightarrow x^2 = \frac{25}{4}$

$\Rightarrow x = \pm \sqrt{\frac{25}{4}} \Rightarrow x = \pm \frac{5}{2}$

57.) What is the zero of a $p(x) = 4u^2 + 8u$ is :

(a) 0 and 2 (b) 0 and -2 (c) -4 and -2 (d) -4 and 2

Ans. (b) 0 and -2

Hint :- We have $p(x) = 4u^2 + 8u = 0$

$4u(u + 2) = 0$

$4u = 0$ or $(u + 2) = 0$

$u = \frac{0}{4}$ or $u = -2$

$u = 0$ or $u = -2$

58.) The zero of a quadratic polynomial $p(x) = x^2 - 2x - 8$ are ..... and ..... .

(a) $(2, -4)$ (b) $(-4, -2)$ (c) $(4, 2)$ (d) $(4, -2)$

Ans. (d) $(4, -2)$

Hint :- $x^2 - 2x - 8 = 0 \Rightarrow x^2 - (4x - 2x) - 8 = 0$

$\Rightarrow x^2 - 4x + 2x - 8 = 0$

$\Rightarrow x(x - 4) + 2(x - 4) = 0$

$\Rightarrow (x - 4)(x + 2) = 0 \Rightarrow x = 4 \text{ or } -2$

59.) The zero of a quadratic polynomial $3x^2 - x - 4$ are :

(a) $\left(\frac{-4}{3}, 1\right)$ (b) $\left(1, \frac{4}{3}\right)$ (c) $\left(-1, \frac{4}{3}\right)$ (d) $\left(-1, \frac{-4}{3}\right)$

Ans. (c) $\left(-1, \frac{4}{3}\right)$

Hint :- $3x^2 - x - 4 = 0 \Rightarrow 3x^2 - (4x - 3x) - 4 = 0$

$\Rightarrow 3x^2 - 4x + 3x - 4 = 0$

$\Rightarrow x(3x - 4) + 1(3x - 4) = 0$

$\Rightarrow (x + 1)(3x - 4) = 0 \Rightarrow x = \frac{4}{3}\ or\ -1$

60.) The zero of a quadratic polynomial $p(x) = 6x^2 - 3 - 7x$ are ..... and ..... .

(a) $\left(\frac{-2}{3}, \frac{-3}{2}\right)$ (b) $\left(\frac{3}{2}, \frac{-1}{3}\right)$ (c) $\left(\frac{-3}{2}, \frac{1}{3}\right)$ (d) $\left(-3, \frac{3}{2}\right)$

Ans. (b) $\left(\frac{3}{2}, \frac{-1}{3}\right)$

Hint :- $6x^2 - 3 - 7x = 0$ (OR) $6x^2 - 7x - 3 = 0$

$\Rightarrow 6x^2 + 2x - 9x - 3 = 0$

$\Rightarrow 2x(3x + 1) - 3(3x + 1) = 0$

$\Rightarrow (2x - 3)(3x + 1) = 0 \Rightarrow x = \frac{3}{2}\ or\ \frac{-1}{3}$

61.) Find a quadratic polynomial, if the sum and product of whose zeroes are 4 and 1 respectively.

(a) $x^2 - 4x + 1$ (b) $x^2 + 4x + 1$

(c) $x^2 + 4x - 1$ (d) $x^2 - 4x - 1$

Ans. (a) $x^2 - 4x + 1$

Hint :- Sum of zeroes $(s) = 4$

Product of zeroes $(p) = 1$

Quadratic polynomial $= x^2 - sx + p$

$= x^2 - 4x + 1$

62.) Find a quadratic polynomial, if the sum and product of whose zeroes are -3 and 2 respectively.

(a) $x^2 - 3x + 2$ (b) $x^2 + 3x + 2$

(c) $x^2 + 3x - 2$ (d) $x^2 - 3x - 2$

Ans. (b) $x^2 + 3x + 2$

Hint :- Sum of zeroes $(s) = -3$

Product of zeroes $(p) = 2$

Quadratic polynomial $= x^2 - sx + p$

$= x^2 - (-3)x + 2$

$= x^2 + 3x + 2$

63.) Find a quadratic polynomial, if the sum and product of whose zeroes are $\sqrt{2}$ and $\frac{1}{3}$ respectively.

(a) $3x^2 - \sqrt{2}x + 3$ (b) $3x^2 - 3\sqrt{2}x + 1$

(c) $3x^2 + 3\sqrt{2}x - 1$ (d) $3x^2 - 3\sqrt{2}x - 1$

Ans. (b) $3x^2 - 3\sqrt{2}x + 1$

Hint :- Sum of zeroes $(s) = \sqrt{2}$

Product of zeroes $(p) = \frac{1}{3}$

Quadratic polynomial $= x^2 - sx + p$

$= x^2 - (\sqrt{2})x + \frac{1}{3}$

$= x^2 - \sqrt{2}x + \frac{1}{3}$

$= 3x^2 - 3\sqrt{2}x + 1$

64.) Find a quadratic polynomial, if the sum and product of whose zeroes are 0 and $\sqrt{5}$ respectively.

(a) $x^2 - \sqrt{5}x + 5$ (b) $x^2 + 5$

(c) $x^2 - \sqrt{5}x + \sqrt{5}$ (d) $x^2 - 3x - 2$

Ans. (b) $x^2 + 5$

Hint :- Sum of zeroes $(s) = 0$

Product of zeroes $(p) = \sqrt{5}$

Quadratic polynomial $= x^2 - sx + p$

$= x^2 - 0x + 5$

$= x^2 + 5$

65.) Find a quadratic polynomial, if the sum and product of whose zeroes are $\left(-\frac{1}{4}\ and\ \frac{1}{4}\right)$ respectively .

(a) $4x^2 - x + 1$ (b) $4x^2 + x + 1$

(c) $4x^2 + x - 1$ (d) $4x^2 - x - 1$

Ans. (b) $4x^2 + x + 1$

Hint :- [Sum of zeroes $(s) = \frac{-1}{4}$

Product of zeroes $(p) = \frac{1}{4}$

Quadratic polynomial $= x^2 - sx + p$

$$= x^2 - \left(-\frac{1}{4}\right)x + \frac{1}{4}$$
$$= x^2 + \frac{1}{4}x + \frac{1}{4}$$
$$= x^2 + \frac{x}{4} + \frac{1}{4}$$
$$= \frac{4x^2+x+1}{4} \qquad = 4x^2 + x + 1$$

66.) Find a quadratic polynomial, whose zeroes are -3 and 2 respectively.

(a) $x^2 - x + 6$ (b) $x^2 + x + 6$

(c) $x^2 + x - 6$ (d) $x^2 - x - 6$

Ans. (c) $x^2 + x - 6$

[Hint] :- Zeroes of a polynomial are -3 and 2 respectively.

Sum of zeroes $(s) = (\alpha + \beta) = -3 + 2 = -1$

Product of zeroes $(p) = (\alpha \times \beta) = -3 \times 2 = -6$

Quadratic polynomial $= x^2 - sx + p$

$= x^2 - (-1)x + (-6)$

$= x^2 + x - 6$

67.) A quadratic polynomial, whose zeroes are -2 and -5 respectively.

(a) $x^2 - 7x + 10$ (b) $x^2 + 7x + 10$

(c) $x^2 + 7x - 10$ (d) $x^2 - 7x - 10$

Ans. (b) $x^2 + 7x + 10$

[Hint] :- Zeroes of a polynomial are -2 and -5 respectively.

Sum of zeroes $(s) = (\alpha + \beta) = -2 + (-5) = -2 - 5 = -7$

Product of zeroes $(p) = (\alpha \times \beta) = -2 \times -5 = 10$

Quadratic polynomial $= x^2 - sx + p$

$= x^2 - (-7)x + 10$

$= x^2 + 7x + 10$

68.) Graph of a linear polynomial $p(x) = ax + b$ is :

(a) Parallel (b) Curve (c) Straight line (d) Intersects

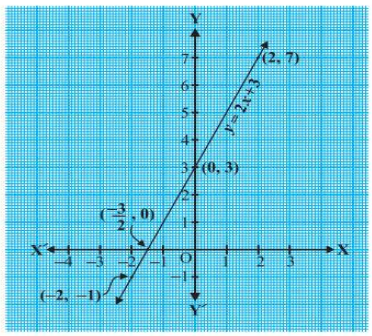
Ans. (c) Straight line.

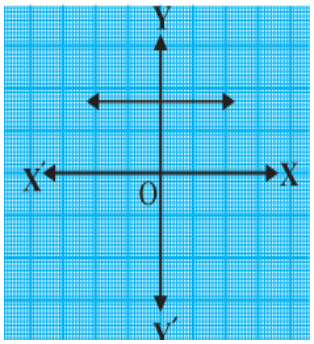
69.) What is the graph of a linear polynomial $y = 2x + 3$ is :

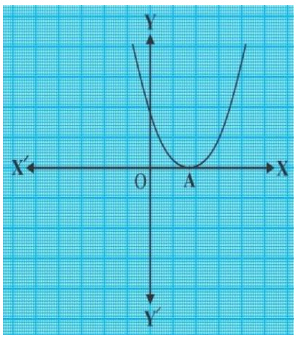
(a) Parallel (b) Curve (c) Straight line (d) Intersects

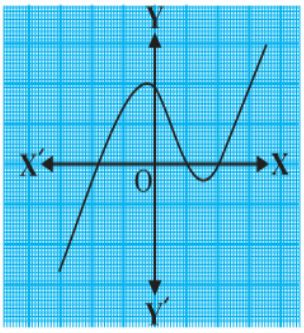
Ans. (c) Straight line.

70.) Which of the following is the graph of a linear polynomial ?









(a) (b) (c) (d)

Ans. (a) Graph of a linear polynomial is a Straight line.

Hint :- [For a linear polynomial $p(x) = ax + b, a \neq 0$, the graph of $y = 2x + 3$, is a Straight line Which Intersects the $x - axis$ at 1 (One) point.]

71.) For a linear polynomial $ax + b, a \neq 0$, the graph of $y = ax + b$, is a Straight line Which Intersects the $x - axis$ at :

(a) $\left(\frac{-b}{a}, -1\right)$ (b) $\left(\frac{b}{a}, 0\right)$ (c) $\left(\frac{-b}{a}, 0\right)$ (d) None of these

Ans. (c) $\left(\frac{-b}{a}, 0\right)$

Hint :- We have $p(x) = ax + b = 0$

$$ax = -b$$

$$x = \frac{-b}{a}$$

72.) Graph of $2x + 3$ intersects the $x - axis$ at :

(a) $\left(\frac{-2}{3}, -1\right)$ (b) $\left(\frac{2}{3}, 1\right)$ (c) $\left(\frac{-3}{2}, 0\right)$ (d) $\left(\frac{3}{2}, 0\right)$

Ans. (c) $\left(\frac{-3}{2}, 0\right)$

Hint :- We have $p(x) = 2x + 3 = 0$

$$2x = -3$$

$$x = \frac{-3}{2}$$

73.) Graph of $p(x) = 3x - 2$ is a Straight line which intersects the $x - axis$ at :

(a) $\left(\frac{-2}{3}, -1\right)$ (b) $\left(\frac{2}{3}, 0\right)$ (c) $\left(\frac{-3}{2}, 0\right)$ (d) $\left(\frac{3}{2}, 0\right)$

Ans. (b) $\left(\frac{2}{3}, 0\right)$

74.) What is the graph of a quadratic polynomial is:

(a) Parabolas (b) Curve (c) Straight line (d) Intersects

Ans. (a) Parabolas.

75.) What is the graph of $p(x) = ax^2 + bx + c, a \neq 0$ is :

(a) Parabolas (b) Curve (c) Straight line (d) Intersects

Ans. (a) Parabolas.

76.) What is the graph of $p(x) = x^2 - 3x - 4$ is :

(a) Parabolas (b) Curve (c) Straight line (d) Intersects

Ans. (a) Parabolas.

77.) Graph of a quadratic polynomial $p(x) = ax^2 + bx + c$ is a parabolas (open Upwards like ∪ if :

(a) $a > 0$ (b) $a < 0$ (c) $a = 0$ (d) $a \neq 0$

Ans. (a) $a > 0$

78.) Graph of a corresponding equation $y = ax^2 + bx + c$ has shape open upwards parabolas like ∪ curve if :

(a) $a > 0$ (b) $a < 0$ (c) $a = 0$ (d) $a \neq 0$

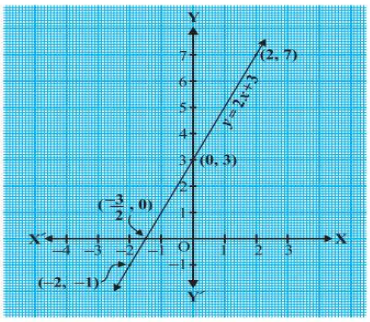
Ans. (a) $a > 0$

79.) Graph of a quadratic polynomial $p(x) = ax^2 + bx + c$ is a parabolas (open Downwards like ∩ if :

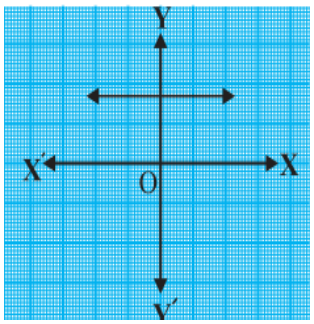
(a) $a > 0$ (b) $a < 0$ (c) $a = 0$ (d) $a \neq 0$

Ans. (b) $a < 0$

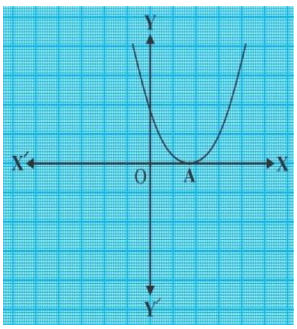
80.) Which of the following is the graph of a quadratic polynomial ?



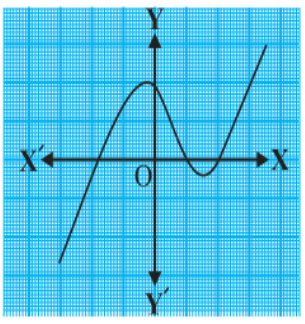
(a)



(b)



(c)



(d)

Ans. (c) Because this graph has a shape open upwards parabolas like.

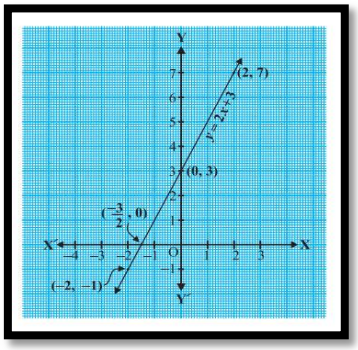
Hint :- [For a quadratic polynomial the graph of $ax^2 + bx + c, a \neq 0$, has two shapes either open upwards like ∪ or open downwards like ∩ are called parabolas.]

81.) Graph of a corresponding equation $y = ax^2 + bx + c$ has shape open downwards parabolas like ∩ curve if :

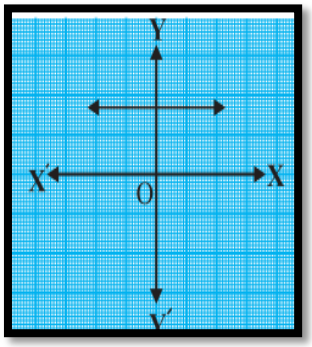
(a) $a > 0$ (b) $a < 0$ (c) $a = 0$ (d) $a \neq 0$

Ans. (b) $a < 0$

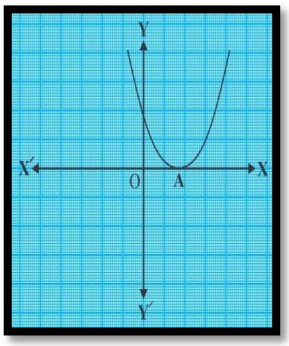
82.) Which of the following is the graph of a constant polynomial ?



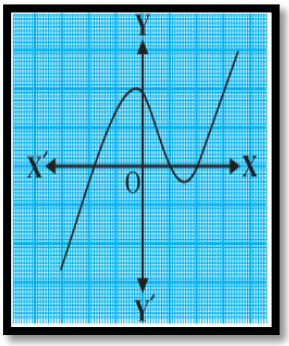
(a)



(b)



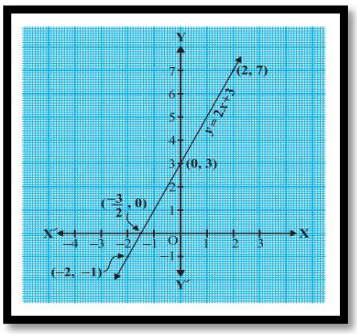
(c)



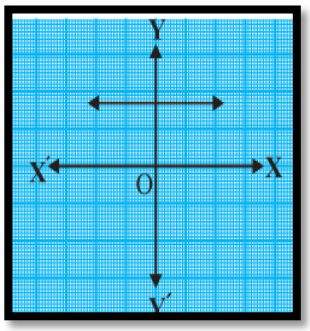
(d)

Ans. (b)

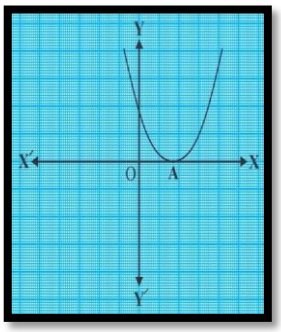
83.) Which of the following is the graph of a cubic polynomial ?



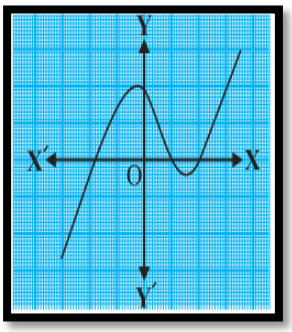
(a)



(b)



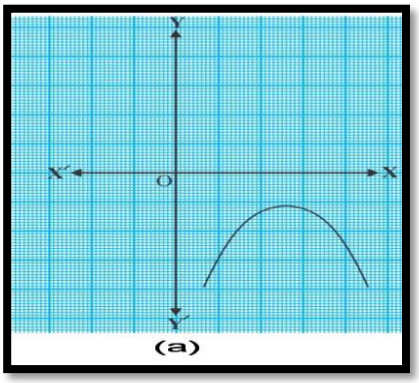
(c)



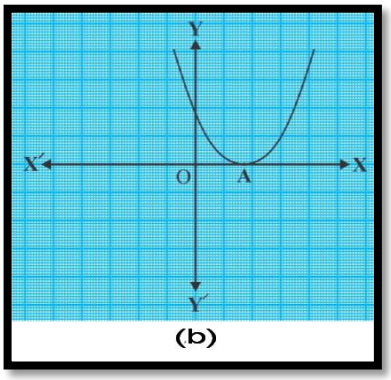
(d)

Ans. (d)

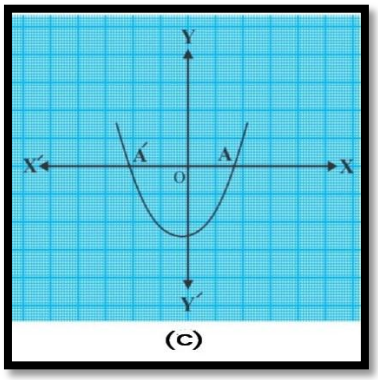
84.) Which of the following graph shows two distinct zeroes of a quadratic polynomial ?



(a)



(b)

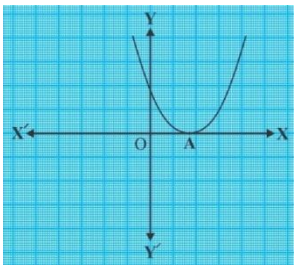


(c)

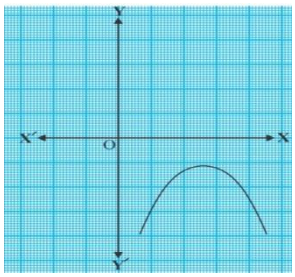
Ans. (c)

Hint :- [The graph of (c) showing $y = p(x)$ Intersects the $x - axis$ at 2 points. So, the number of zeroes for the given graph is 2.]

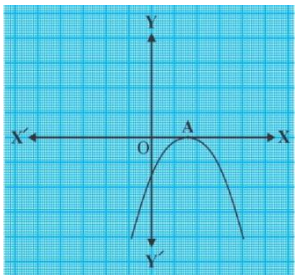
85.) Which of the following is not the graph of a quadratic polynomial ?



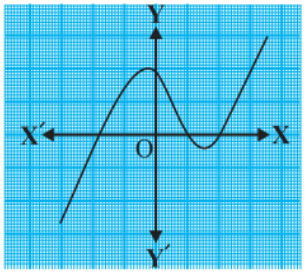
(a)



(b)



(c)



(d)

Ans. (d)

Hint :- [For a quadratic polynomial the graph of $ax^2 + bx + c, a \neq 0$, has two shapes either open upwards like ∪ or open downwards like ∩ are called parabolas.]

86.) Which one of the following is a Polynomial

(a) $\frac{1}{2x^2+3x+4}$ (b) $\frac{1}{3x+4}$

(c) $4x^3 + 3x^2 + 2x - \frac{3}{\sqrt{5}}$ (d) $\sqrt{y} + 4$

Ans. (c) $4x^3 + 3x^2 + 2x - \frac{3}{\sqrt{5}}$

87.) If α, β are the zeroes of the $p(x) = x^2 - 4x + 5$ then find $\frac{1}{\alpha} + \frac{1}{\beta}$

(a) $\frac{-4}{5}$ (b) $\frac{4}{5}$ (c) $\frac{5}{4}$ (d) $\frac{-5}{4}$

Ans. (a) $\frac{-3}{2}$ $\frac{-4}{5}$ (b) $\frac{4}{5}$

Hint :- We have α, β are the zeroes of the $p(x) = x^2 - 4x + 5$

$$\alpha + \beta = \frac{-b}{a} = \frac{-(-4)}{1} = 4$$

$$\alpha\beta = \frac{c}{a} = \frac{5}{1} = 5$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha+\beta}{\alpha\beta} = \frac{4}{5}$$

88.) If one of the zero of a quadratic polynomial $ax^2 + bx + c$ is zero then the other zero is :

(a) $\frac{-b}{a}$ (b) $\frac{b}{a}$ (c) $\frac{c}{a}$ (d) $\frac{a}{b}$

Ans. (a) $\frac{-b}{a}$

Hint :- [We have, one of the zero of a quadratic polynomial is zero]

If α and β are three zeroes of the quadratic polynomial $ax^2 + bx + c$, then

$$\alpha + \beta = \frac{-b}{a}$$

$$0 + \beta = \frac{-b}{a} \Rightarrow \alpha = \frac{-b}{a}$$

89.) If the sum of the zeros of the quadratic polynomial $p(x) = kx^2 - 6x + 1$ is 3, then the value of k is :

(a) 6 (b) 2 (c) -2 (d) 3

Ans. (b) 2

Hint :- [We have, given quadratic polynomial be $p(x) = kx^2 - 6x + 1$

$$\therefore \text{Sum of zeroes } (\alpha + \beta) = \frac{-b}{a}$$

$$3 = \frac{-(-6)}{k}$$

$$3k = 6 \Rightarrow k = \frac{6}{3} \Rightarrow \frac{\cancel{6}^{2}}{\cancel{3}_{1}} = 2$$

90.) If $x - 3$ is a factor of quadratic polynomial $p(x) = x^2 + kx - 12$ then the value of k is :

(a) 1 (b) 2 (c) 4 (d) -4

Ans. (a) 1

Hint :- We have If $x - 3$ is a factor of quadratic polynomial $p(x). = x^2 + kx - 12$

$$\therefore p(3) = 0 \Rightarrow (3)^2 + k(3) - 12 = 0$$

$$9 + 3k - 12 = 0$$

$$3k = 12 - 9$$

$$3k = 3$$

$$k = \frac{3}{3} = 1$$

91.) If -2 is a zero of quadratic polynomial $p(x) = x^2 - 2x - 4k$ then the value of k is :

(a) 1 (b) 2 (c) 4 (d) -4

Ans. (b) 2

[Hint] :- We have, $p(x) = x^2 - 2x - 4k$

---

since -2 is a zero of $p(x)$

$\therefore\ p(-2) = 0$

$(-2)^2 - 2(-2) - 4k = 0$

$4 + 4 - 4k = 0 \quad \Rightarrow 8 - 4k = 0$

$-4k = -8$

$k = \frac{-8}{-4} = 2$

92.) If k is a zero of $p(x) = 4x + 8$, then $p(k) = 0$ find value of $p(x)$ at $= k$.

(a) 1 (b) 2 (c) 3 (d) -2

Ans. (d) -2

[Hint] :- We have k is a zero of $p(x) = 4x + 8$

k is said to be a zero of a polynomial $p(x)$, if $p(k) = 0$

$4k + 8 = 0,$

i.e., $4k = -8$

$k = \frac{-8}{4},\ k = \frac{-8^2}{4_1} = -2$

93.) If 3 is a zero of quadratic polynomial $x^2 + kx - 12$ then the value of k is :

(a) 1 (b) 2 (c) 4 (d) -4

Ans. (a) 1

[Hint] :- We have 3 is a zero of quadratic polynomial $x^2 + kx - 12$

3 is said to be a zero of a polynomial if $x^2 + kx - 12 = 0$

$(3)^2 + k(3) - 12 = 0$

$9 + 3k - 12 = 0$

$3k = 12 - 9$

$3k = 3$

$k = \frac{3}{3} = 1$

94.) If $p(x)$ and $g(x)$ are any two polynomials with $g(x) \neq 0$, then we can find Polynomials $q(x)$ and $r(x)$ such that $p(x) = g(x) \times q(x) + r(x)$

(a) $r(x) = 0$

(b) Degree of $r(x) <$ Degree of $g(x)$

(c) Both (a) and (b) in the above

(d) None of these

Ans. (c) Both (a) and (b) in the above

95.) Which of the following relation is always satisfied when we divide a number or polynomial by another number or polynomial ?

(a) Dividend $=$ Quotient $\times$ Remainder $+$ Divisor

(b) Dividend $=$ Remainder $\times$ Divisor $+$ Quotient

(c) Divisor $=$ Dividend $\times$ Quotient $+$ Remainder

(d) Dividend $=$ Divisor $\times$ Quotient $+$ Remainder

Ans. (d) Dividend $=$ Divisor $\times$ Quotient $+$ Remainder

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96.) Find Sum and product of the zeroes of the quadratic polynomial $p(x) = x^2 - 2x - 8$ is :

(a) $(2,\ 8)$ (b) $(2, -8)$ (c) $(-2, -8)$ (d) $(-2, 8)$

Ans. (b) $(2, -8)$

(Hint) :- We have quadratic polynomial $p(x) = x^2 - 2x - 8$

Here, $a = 1, b = -2, c = -8$

$\therefore$ Sum of the zeroes $= \frac{-b}{a} = \frac{-(-2)}{1} = 2$

Product of the zeroes $= \frac{c}{a} = \frac{-8}{1} = -8$

97.) Find Sum and product of the zeroes of the quadratic polynomial $p(x) = x^2 + 7x + 10$ is :

(a) $(7,\ 10)$ (b) $(7, -10)$ (c) $(-7, -10)$ (d) $(-7, 10)$

Ans. (d) $(-7, 10)$

(Hint) :- We have quadratic polynomial $p(x) = x^2 + 7x + 10$

Here, $a = 1,\ b = 7,\ c = 10$

$\therefore$ Sum of the zeroes $= \frac{-b}{a} = \frac{-7}{1} = -7$

Product of the zeroes $= \frac{c}{a} = \frac{10}{1} = 10$

98.) If $p(x)$ and $g(x)$ are any two polynomials with $g(x) \neq 0$, then we can Find Polynomials $q(x)$ and $r(x)$ such that $p(x) = g(x) \times q(x) + r(x)$

(a) Degree of $r(x) =$ Degree of $g(x)$

(b) Degree of $r(x) <$ Degree of $g(x)$

(c) Degree of $r(x) >$ Degree of $g(x)$

(d) None of these

Ans. (b) Degree of $r(x) <$ Degree of $g(x)$

99.) Dividend $= (\ldots\ldots\ldots) \times (\ldots\ldots\ldots) + (\ldots\ldots\ldots)$

(a) Divisor $\times$ Remainder $+$ Quotient

(b) Divisor $\times$ Quotient $+$ Remainder

(c) Quotient $\times$ Remainder $+$ Divisor

(d) None of these

Ans. (b) Divisor $\times$ Quotient $+$ Remainder

100.) If a polynomial $p(x)$ is divided by $g(x)$, then we obtained $q(x)$ as quotient and the $r(x)$ as remainder, division algorithim is :

(a) $r(x) = p(x) \times q(x) + g(x)$

(b) $g(x) = p(x) \times q(x) + r(x)$

(c) $p(x) = g(x) \times q(x) + r(x)$

(d) $g(x) = p(x) \times q(x) + r(x)$

Ans. (c) $p(x) = g(x) \times q(x) + r(x)$

101.) Which of the following relation is always satisfied when we divide a Number or polynomial by another number or polynomial ?

(a) Dividend $=$ Quotient $\times$ Remainder $+$ Divisor

(b) Dividend $=$ Remainder $\times$ Divisor $+$ Quotient

(c) Divisor $=$ Dividend $\times$ Quotient $+$ Remainder

(d) Dividend $=$ Divisor $\times$ Quotient $+$ Remainder

Ans. (d) Dividend $=$ Divisor $\times$ Quotient $+$ Remainder

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102.) The sum and product of the quadratic polynomial $x^2 + px + q$ are 4 and -3 respectively. Find the value of p and q.

(a) 4 and 3 (b) 4 and -3 (c) -4 and -3 (d) -4 and 3

Ans. (c) -4 and -3

103.) What is the degree of a Polynomial $p(x) = ax^3 + bx + c$?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (b) 3 (Three)

104.) Which of the following is true about division algorithm formula ?

(a) Dividend $=$ Quotient $\times$ Remainder $+$ Divisor

(b) Dividend $=$ Remainder $\times$ Divisor $+$ Quotient

(c) Dividend $=$ Divisor $\times$ Quotient $+$ Remainder

(d) Divisor $=$ Dividend $\times$ Quotient $+$ Remainder

Ans. (c) Dividend $=$ Divisor $\times$ Quotient $+$ Remainder

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105.) If $(x) = ax^2 + bx + c$, then $\frac{c}{a}$ is equal to :

(a) Sum of zeroes

(b) Product of zeroes

(c) Subtraction of zeroes

(d) 0

Ans. (b) Product of zeroes

106.) If $(x) = ax^2 + bx + c$, then $\frac{-b}{a}$ is equal to :

(a) Sum of zeroes

(b) Product of zeroes

(c) 1

(d) 0

Ans. (a) Sum of zeroes

107.) What is the zero of a polynomial $p(x) = 2x^2 - 8$ is :

(a) 0 and 2 (b) 0 and -2 (c) -4 and 4 (d) -2 and 2

Ans. (b) 0 and -2

Hint :- We have $p(x) = 2x^2 - 8 = 0$

$$2x^2 = 8$$

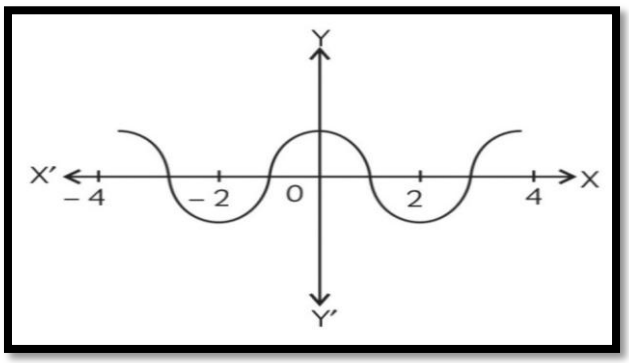
$$x^2 = \frac{8}{2} = \frac{\cancel{8}^{4}}{\cancel{2}_{1}} = 4$$

$$x^2 = 4$$

$$x = \pm\sqrt{4}$$

$$x = \pm 2 \text{ or } -2 \text{ and } 2$$

108.) The graph of $y = p(x)$ is given below. for some polynomial $p(x)$. Find the number of zeroes lying between -2 to 2 of the polynomial $p(x)$ is



(a) 1 (b) 2 (c) 3 (d) 0

Ans. (b) 2

Hint :- [Because between -2 to 2, curve cut the $x-axis$ at 2 point. So, the number of zeroes lying between -2 to 2 of the polynomial $p(x)$ is 2]

109.) What is the degree of a Polynomial $p(x) = ax^2 + bx + c$?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (b) 2 (Two)

110.) What is the degree of a Polynomial $p(x) = ax^3 + bx^2 + cx + d$?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (c) 3 (Three)

111.) A Polynomial $p(x) = ax^2 + bx + c$ is called a ..... polynomial ?

(a) Linear (b) Quadratic (c) Cubic (d) None of these

Ans. (b) Quadratic.

(Hint) :- Polynomial of degree 2 (Two) is called a quadratic polynomial. Here degree of $ax^2 + bx + c$ is (Two) so correct answer is (b) Quadratic.

112.) A Polynomial $p(x) = ax^3 + bx^2 + cx + d$ is called a ..... polynomial ?

(a) Linear (b) Quadratic (c) Cubic (d) Quartic

Ans. (c) Cubic.

(Hint) :- Polynomial of degree 3 (Three) is called a cubic polynomial. Here, degree of $ax^3 + bx^2 + cx + d$ is (Three) $\therefore$ correct answer is (c).

113.) A Polynomial $p(x)\ ax + b$ is called a ..... polynomial ?

(a) Linear (b) Quadratic (c) Cubic (d) None of these

Ans. (a) Linear

(Hint) :- Polynomial of degree 1 (One) is called a linear polynomial ?

114.) Sum of the zeroes of the quadratic polynomial $p(x) = 6x^2 - 3 - 7x$ is :

(a) $\frac{-7}{6}$ (b) $\frac{7}{6}$ (c) $\frac{1}{2}$ (d) $\frac{-1}{2}$

Ans. (b) $\frac{7}{6}$

Hint :- We have, quadratic polynomial $p(x) = 6x^2 - 3 - 7x$

More generally any quadratic polynomial in $p(x)$ is of form $ax^2 + bx + c$, where a, b, c are real numbers and $a \neq 0$.

$\therefore$ quadratic polynomial $p(x) = 6x^2 - 7x - 3$

Here, $= 6, b = -7, c = -3$, Sum of the zeroes $= \frac{-b}{a} = \frac{-(-7)}{6} = \frac{7}{6}$

115.) Degree of a linear polynomial is ?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (a) 1

116.) What is the degree of a quadratic polynomial is ?

(a) 1 (b) 2 (c) 3 (d) 0

Ans. (b) 2

117.) What is the number of zeroes of a given polynomial $(x+4)(x-2) =$ is :

(a) 4 , 2 (b) 4, -2 (c) $-4, -2$ (d) $-4, 2$

Ans. (d) $-4, 2$

118.) Which of the following is a Polynomial ?

(a) $2x^2 + \sqrt{5}x + 4$ (b) $2x^2 + \sqrt{x} + 4$

(c) $4x^2 + 3x^{-2} + 2x$ (d) $x^2 + 2x + 5^{\frac{3}{2}}$

Ans. (a) $2x^2 + \sqrt{5}x + 4$

119.) Which of the following are zero of a quadratic polynomial $p(x) = x^2 - 4$:

(a) $-2, 2$ (b) $\sqrt{2}, -\sqrt{2}$ (c) 2, 2 (d) $\sqrt{2}, \sqrt{2}$

Ans. (a) $-2, 2$

120.) The zero of a quadratic polynomial $p(x) = x^2 - 9$ are ?

(a) $-3, 3$ (b) $\sqrt{3}, -\sqrt{3}$ (c) $3, 3$ (d) None of these

Ans. (a) $-3, 3$

Hint $\Rightarrow x^2 - 9 = 0$

$\Rightarrow x^2 = 9$

$\Rightarrow x = \pm\sqrt{9}$

$\Rightarrow x = \pm 3$

$\Rightarrow x = -3, 3$

121.) Which of the following is a linear Polynomial ?

(a) $ax^2 + bx + c$ (b) $ax + b$

(c) $ax^3 + bx^2 + cx + d$ (d) None of these

Ans. (b) $ax + b$

122.) Polynomial of degree ..... is called a linear polynomial ?

(a) 1 (One) (b) 2 (Two) (c) 3 (Three) (d) 0 (Zero)

Ans. (a) 1 (One)

123.) Polynomial of degree ……. is called a quadratic polynomial ?

(a) 1 (One) (b) 2 (Two) (c) 3 (Three) (d) 0 (Zero)

Ans. (b) 2 (Two)

124.) Polynomial of degree ……. is called a cubic polynomial ?

(a) 1 (One) (b) 2 (Two) (c) 3 (Three) (d) 0 (Zero)

Ans. (c) 3 (Three)

125.) Polynomial of degree ……. is called a constant polynomial ?

(a) 1 (One) (b) 2 (Two) (c) 3 (Three) (d) 0 (Zero)

Ans. (d) 0 (Zero)

126.) Quadratic polynomial has ……. zeroes.

(a) 1 (b) 2 (c) 3 (d) More than 2

Ans. (b) 2

127.) Quadratic polynomial has ……. real zeroes.

(a) 2 (b) At least 2 (c) 3 (d) At most 2

Ans. (d) At most 2

128.) Quadratic polynomial has ……. maximum number of zeroes.

(a) 2 (b) At least 2 (c) 3 (d) More than 2

Ans. (b) 2

[Hint] :- (There are at most 2 zeroes of a quadratic polynomial.)

129.) Sum of the zeroes of the quadratic polynomial $p(x) = x^2 - 2x - 8$ is :

(a) 1 (b) 2 (c) 3 (d) 4

Ans. (b) 2 (Hint) :- Here, $a = 1, b = -2$ $\therefore$ Sum of the zeroes $= \frac{-b}{a} = \frac{-(-2)}{1} = 2$
