

Factorization and Algebraic Manipulation

Sr	Questions	Answers Choice
1	H.C.F of $a^3 + b^3$ and $a^2 - ab + b^2$	A. $a + b$ B. $a^2 - ab - b^2$ C. $(a - b)^2$ D. $a^2 + b^2$
2	Factors of $x^4 - y^4$	A. $(x - y)(x + y)(x^2 + y^2)$ B. $(x - y)(x^2 + y^2)$ C. $(x - y)(x + y)(x^2 - y^2)$ D. $(x + y)(x^2 + y^2)$
3	$(x + y)(x^2 - xy + y^2) =$	A. $x^3 - y^3$ B. $x^3 + y^3$ C. $(x + y)^3$ D. $(x - y)^3$
4	Factors of $x^4 - 16$ is	A. $(x - 2)^2$ B. $(x - 2)(x + 2)(x^2 + 4)$ C. $(x - 2)(x + 2)$ D. $(x + 2)^2$
5	The product of two polynomials is equal to the of their H.C.F and L.C.M	A. Sum B. Difference C. Product D. Quotient
6	Find m so that $x^2 + 8x + m$ is a complete square.	A. 8 B. -8 C. 4 D. 16
7	The HCF of $a^3 b^3$ and ab^2 is	A. $a^3 b^3$ B. ab^2 C. $a^2 b^2$ D. $a^2 b$
8	The LCM of $16x^2$, $4x$ and $30xy$ is	A. $480x^3 y$ B. $240xy$ C. $240x^2 y$ D. $120x^4 y$
9	Factors of $8x^3 - y^3$ are	A. $(2x + y)(4x^2 + 2xy - y^2)$ B. $(2x + y)(4x^2 - 2y + y^2)$ C. $(2x - y)(4x^2 - 2xy + y^2)$ D. $(2x - y)(4x^2 + 2xy + y^2)$
10	The square root of $x^2 - 6x + 9$ is	
11	Factors of $3x^2 - x - 2$ are	A. $(x + 1)(3x - 2)$ B. $(x + 1)(3x + 2)$ C. $((x - 1)(3x - 2)$ D. $(x - 1)(3x + 2)$
12	Factorization of $x^3 + 3x^2 + 3x + 1$ is	A. $(x + 1)^3$ B. $(x - 1)^3$ C. $(x + 1)(x^2 + x + 1)$ D. $(x - 1)(x^2 - x + 1)$
13	The factors of $4x^2 - 12x + 9$ are	A. $(2x + 3)^2$ B. $(2x - 3)^2$ C. $(2 + 3x)(2 - 3x)^2$ D. $(2x - 3)(2x + 3)$
14	What will be added to complete the square of $9a^2 - 12ab$?	A. $-16b^2$ B. $16b^2$ C. $4b^2$ D. $-4b^2$
15	Cubic polynomial has degree	A. 1 B. 2 C. 3 D. 4
16	H.C.F. of $x^3 y - xy$ and $x^5 y^2 - x^2 y^5$ is	A. $xy(x^2 - y^2)$ B. $xy(x - y)$ C. $x^2 y^2(x - y)$

$$D. xy(x^3 - y^3)$$

17 L.C.M. of $a^2 - b^2$ and $a^4 - b^4$ is

- A. $a^2 + b^2$
- B. $a^2 - b^2$
- C. $a^4 - b^4$
- D. $a - b$

18 L.C.M. of $15x^2z$, $45xy^2$ and $30yz^2$ is

- A. $90xyz$
- B. $90x^2y^2z^2$
- C. $90x^3y^3z^3$
- D. $15x^2yz$

19 The square root of $x^2 - 6x + 9$ is

- C. $x - 3$
- D. $x + 3$

20 H.C.F. of $a^2 - b^2$ and $a^3 - b^3$ is

- A. $a - b$
- B. $a + b$
- C. $a^2 + ab + b^2$
- D. $a^2 - ab + b^2$