

Work Sheet – 01(Mathematics)
for class – Ten (16.09.2020)
Chapter- Three, Exercise- 3.3
Algebraic Expression

Creative Multiplication Choice Questions

1. Which one is the factor of $x^3 - 2x - 4$?

[D.B.- 20]

- a) $x - 4$ b) $x - 2$
 c) $x + 2$ d) $x + 4$

2. What is the factorization of $35 - 2x - x^2$?

[D.B.- 20]

- a) $(7 - x)(5 + x)$ b) $(7 - x)(5 - x)$
 c) $(7 + x)(5 - x)$ d) $(7 + x)(5 + x)$

3. $70 - x^2 - 9x$ then which one is the factorized from?

[Ctg.B.- 20]

- a) $7 + x$ b) $5 - x$
 c) $7 - x$ d) $14 - x$

4. Which one is a factor of $a^2 - 5a - 6$?

[J.B.- 20]

- a) $a - 3$ b) $a - 2$
 c) $a - 1$ d) $a + 1$

5. Which one of the following is the factorized form of $x^4 - 6x^2y^2 + y^4$?

[D.B.- 19]

- a) $(x^2 + 3y^2)(x^2 - 2y^2)$
 b) $(x^2 - 3y^2)(x^2 + 2y^2)$
 c) $(x^2 + 2xy + y^2)(x^2 - 2xy + y^2)$
 d) $(x^2 + 2xy - y^2)(x^2 - 2xy - y^2)$

6. Which is a factor of the expression $x^2 - 11x - 12$ of the following?

[R.B.- 19]

- a) $x - 12$ b) $x - 4$
 c) $x - 3$ d) $x - 1$

7. Which one is as factor of $a^2 + 5a - 6$?

[J.B.- 19]

- a) $a - 6$ b) $a - 3$
 c) $a + 2$ d) $a + 6$

8. Which one is a factor of $35 - 2y - y^2$?

[All B.- 18]

- a) $5 + y$ b) $y - 5$
 c) $7 + y$ d) $7 - y$

9. Which one of the following are the roots of the equation $x^2 - 5x - 6 = 0$?

[D.B.- 17]

- a) 2, 3 b) 6, -1
 c) 6, 1 d) 3, -2

10. Which one of the following is the factorized form of $a^2 - a - 6$?

[Ctg.B.- 17]

- a) $(a + 2)(a - 3)$
 b) $(a - 2)(a - 3)$
 c) $(a - 2)(a + 3)$
 d) $(a + 2)(a + 3)$

11. What is the factor $a^6 - b^6$? [J.B.- 16]

- a) $(a + b)(b - a)$
 b) $(a + b)(a^2 - b^2 + ab)$
 c) $(a - b)(a^2 + ab - b^2)$
 d) $(a + b)$

12. Which one is factorized form of $(a^2 - 5a - 6)$?

[D.B.- 15]

- a) $(a - 3)(a + 2)$
 b) $(-a - 3)(a + 2)$
 c) $(a - 6)(a + 1)$
 d) $(a + 6)(a - 1)$

13. Which one of the factors of $m^8 + m^4 - 2$?

[Dj.B.- 15]

- a) $m^4 - 2$
 b) $m^3 - 1$
 c) $m^2 + 2$
 d) $m + 1$

14. Which one of the factorized from of $y^2 + 5y - 6$?

[Dj.B.- 15]

- a) $(y + 3)(y - 2)$
 b) $(y - 3)(y + 2)$
 c) $(y + 6)(y - 1)$
 d) $(y - 6)(y + 1)$

15. Which one of the factors of $a^2 - 1 + 2b - b^2$?

[S.B.- 15]

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

16. Which one of the factors of $x^2 - x - 42$?

[B.B.- 15]

- a) $(x + 6)(x - 7)$
 b) $(x - 6)(x - 7)$
 c) $(x - 6)(x + 7)$
 d) $(x + 6)(x + 7)$

17. Which of the following is the resolution into factors $9x^2 - 30xy + 25y^2$?

- a) $(3x - 5y)$ b) $(3x + 5y)$
 c) $(5x - 3y)$ d) $(5x + 3y)$
18. Which of the following is the resolution into factors of $a^2 - 1 + 2b - b^2$?
- a) $(a - b + 1)(a - b + 1)$
 b) $(a + b - 1)(a - b + 1)$
 c) $(a + b - 1)(a - b - 1)$
 d) $(a - b - 1)(a - b + 1)$
19. Which of the following is the resolution into factors of $ab - b + a - 1$?
- a) $(b + 1)(a + 1)$
 b) $(b - 1)(a + 1)$
 c) $(a - 1)(b + 1)$
 d) $(a + 1)(b + 1)$
20. Which of the following is the resolution into factors of $\frac{1}{3}x^2 - 3$?
- a) $\frac{1}{3}(x + 3)\left(\frac{x}{3} - 1\right)$
 b) $3\left(\frac{x}{3} + 1\right)(x - 1)$
 c) $3\left(\frac{x}{3} - 1\right)(x + 1)$
 d) $\frac{1}{3}(x + 3)(x - 3)$
21. Which of the following is the resolution into factors of $x^2 + 12x + 35$?
- a) $(x - 5)(x - 7)$
 b) $(x + 5)(x + 7)$
 c) $(x + 5)(x - 7)$
 d) $(x - 5)(x + 7)$
22. Which of the following is the resolution into factors of $x^2 - 5x + 6$?
- a) $(x - 2)(x - 3)$
 b) $(x + 3)(x - 2)$
 c) $(x + 2)(x - 3)$
 d) $(x + 2)(x - 3)$
23. Which of the following is equal to $(x - 7)(x + 5)$?
- a) $x^2 - 2x + 35$
 b) $x^2 - 2x - 35$
 c) $x^2 - 12x + 35$
 d) $x^2 + 2x + 35$
24. Which of the following is the resolution into factors of $ax^2 + (a^2 + 1)x + a$?
- a) $(x + a)(ax + 1)$
 b) $(x + a)(ax^2 + 1)$
 c) $(x + 1)(ax + 1)$
 d) $(x + 1)(ax^2 + 1)$
25. If $(x + 2)(4x - 3)$ is the resolution into factors of an expression what is that expression?
- a) $4x^2 - 5x + 6$
 b) $4x^2 - 5x - 6$
 c) $4x^2 + 5x + 6$
 d) $4x^2 + 5x - 6$
26. Which of the following is a factor of $x^4 + 4$?
- a) $x^2 + 2x - 2$
 b) $x^2 - 2x - 2$
 c) $x^2 - 2x + 2$
 d) $x^2 + x + 2$
27. Which one is the factorized form of $8x^3 - 10x^2 + 5x - 1$?
- a) $(2x - 1)(4x^2 + 3x + 1)$
 b) $(2x - 1)(4x^2 - 3x - 1)$
 c) $(2x - 1)(4x^2 + 3x - 1)$
 d) $(2x - 1)(4x^2 - 3x + 1)$
28. Which of the following is a factor of $2x^4 + 16x$?
- a) $2x(x + 2)(x^2 - 2x + 4)$
 b) $2x(x - 2)(x^2 + 2x + 4)$
 c) $2x(x + 2)(x^2 + 2x + 4)$
 d) $(x + 2)(x^2 - 2x + 4)$
29. Which of the following is the resolution into factors of $\frac{1}{2}x^2 + \frac{7}{6}x + \frac{1}{3}$?
- a) $\left(x - \frac{1}{3}\right)\left(\frac{x}{2} - 1\right)$
 b) $\left(x + \frac{1}{3}\right)\left(\frac{x}{2} + 1\right)$
 c) $\left(x - \frac{1}{3}\right)\left(\frac{x}{2} + 1\right)$
 d) $\left(x + \frac{1}{3}\right)\left(\frac{x}{2} - 1\right)$
30. Which one is the following being the factorized form of $y^4 + y^2 + 1$?
- a) $(y^2 - y + 1)(y^2 + y - 1)$
 b) $(y^2 - y - 1)(y^2 + y + 1)$
 c) $(y^2 + y + 1)(y^2 + y + 1)$
 d) $(y^2 + y + 1)(y^2 - y + 1)$
31. Which of the following is the resolution into factors of $a^2 - 30a + 216$?
- a) $(a - 18)(a + 12)$

- b) $(a - 18)(a - 12)$
 c) $(a + 18)(a + 12)$
 d) $(a + 18)(a - 12)$
32. Which of the following is the resolution into factors of $12x^2 - 38x + 20$?
- a) $(2x - 5)(6x + 4)$
 b) $(2x + 5)(6x - 4)$
 c) $(2x + 5)(6x + 4)$
 d) $(2x - 5)(6x - 4)$
33. Which of the following is the resolution into factors of $(x + 5)(x - 9) - 15$?
- a) $(x - 10)(x - 6)$
 b) $(x - 10)(x + 6)$
 c) $-(x - 10)(x + 6)$
 d) $(x + 10)(x + 6)$
34. Which of the following is a factor of $35 - 2x - x^2$?
- a) $(5 + x)$
 b) $x - 7$
 c) $5 - x$
 d) $x^2 + 7$
35. Which of the following is the resolution into factors of $5 - 4x - x^2$?
- a) $(5 - x)(1 - x)$
 b) $(5 + x)(1 + x)$
 c) $(5 - x)(1 + x)$
 d) $(5 + x)(1 - x)$
36. Which one of the following is the lowest form of $\frac{x^2 - y^2}{x^2 + 2xy + y^2}$?
- a) $\frac{x + y}{2xy}$ b) $\frac{x + y}{2x - y}$
 c) $\frac{x + y}{x - y}$ d) $\frac{x - y}{x + y}$
37. Which of the following is the resolution into factors of $x^2 - a^2 + 2ab - b^2$?
- a) $x - a - b$
 b) $x + a + b$
 c) $x + a - b$
 d) $-(x - a - b)$
38. Which of the following is the resolution into factors of $\frac{1}{2}x^2 - 3x + 4$?
- a) $\frac{1}{2}(x + 2)(x - 2)$
- b) $\left(\frac{x}{2} - 2\right)(x - 2)$
 c) $(x - 4)(x - 2)$
 d) $(x - 1)(x - 3)$
39. Which of the following is the resolution into factors of $a^6 - 64$?
- a) $(a + 2)$
 b) $(a^2 + 2)$
 c) $(a^2 - 2)$
 d) $(a^2 + 4)$
40. Which of the following is the resolution into factors of $8a^3 + \frac{b^3}{27}$?
- a) $\left(2a + \frac{b}{3}\right)$
 b) $\left(2a - \frac{b}{3}\right)$
 c) $\left(2a + \frac{b}{3}\right)^2$
 d) $\left(2a + \frac{b}{3}\right)^3$
41. Which of the following is the resolution into factors of $a^3 + 5\sqrt{5}$?
- a) $a^2 + \sqrt{5}a + 25$
 b) $a^2 - \sqrt{5}a + 5$
 c) $a^2 - 5\sqrt{5}a + 5$
 d) $a^2 + 5\sqrt{5}a + 25$
42. Which of the following is the resolution into factors of $2 - 16p^3$?
- a) $2(1 + 2p)(1 + 2p + 4p^2)$
 b) $2(1 - 2p)(1 + 2p + 4p^2)$
 c) $2(1 + 2p)(1 - 2p + 4p^2)$
 d) $2(1 - 2p)(1 - 2p + 4p^2)$
43. Which of the following is equal to $8x^3 + 36x^2y + 54xy^2 + 27y^3$?
- a) $(2x - 3y)^3$
 b) $(2x + 3y)^3$
 c) $(3x + 2y)^3$
 d) $(3x - 2y)^3$
44. Which of the following formula should be used to resolve into factor of $8 - a^3 + 3a^2b - 3ab^2 + b^3$?
- a) $a^3 + b^3$ b) $a^3 - b^3$
 c) $a^2 - b^2$ d) $(a + b)^2$
45. Which of the following is the resolution into factors of $a^3 + \frac{1}{27}$?
- a) $\left(a + \frac{1}{3}\right)\left(a^2 - \frac{a}{3} + \frac{1}{9}\right)$
 b) $\left(a + \frac{1}{3}\right)\left(a^2 + \frac{a}{3} + \frac{1}{9}\right)$

c) $\left(a + \frac{1}{3}\right)\left(a^2 - \frac{a}{3} + \frac{1}{9}\right)$

d) $\left(a - \frac{1}{3}\right)\left(a^2 - \frac{a}{3} - \frac{1}{9}\right)$

46. Which of the following is the resolution into factors of $24x^3 - 3x$?

a) $3x(2x - 1)(4x^2 - 2x + 1)$

b) $3x(2x - 1)(4x^2 + 2x + 1)$

c) $3x(2x + 1)(4x^2 + 2x + 1)$

d) $3x(2x - 1)(4x^2 - 2x - 1)$

47. Which of the following is the resolution into factors of $x^3 + 3x^2 + 3x + 2$?

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

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

c) $(x - 2)(x^2 - x - 1)$

d) $(x + 2)(x^2 + x + 1)$

48. Which of the following is a factor of $x^3 + 27$?

a) $x - 3$

b) $x^2 - 3x + 9$

c) $(x + 3)^2$

d) $x + 9$

49. Which of the following is a factor of $2\sqrt{2}x^3 + 125$?

a) $\sqrt{2}x + 5$

b) $2x + 5$

c) $\sqrt{2}x + 5$

d) $2x^2 + 5$

50. Factor of algebraic expression $\frac{a^3}{27} - b^3$ is -

i. $\left(\frac{a}{3} - b\right)$

ii. $\left(\frac{a}{3} + b\right)$

iii. $\left(\frac{a^2}{9} + \frac{ab}{3} + b^2\right)$.

Which one of the following is correct?

a) i and ii

b) i and iii

c) ii and iii

d) i, ii and iii