MATHS

BOOKS - JNAN PUBLICATION

ALGEBRAIC OPERATIONS

Example

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1. Factroise the following.

25xy

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2. Factroise the following.

$$18xy^2$$

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3. Factroise the following.

$$15q^2r^2$$

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4. Factroise the following.

10xyz

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5. Factroise the following.

12xyz

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6. Factorise the following.

$$12x^2y(x + 2)$$

7. Factroise the following.

$$18yz^2(2y + 3z)$$

8. Factroise the following.

16xyz (x+y)

9. Factroise the following.

$15pq^2(p + 3q)$

10. Factroise the following.

$$14mn^2(2m - n)$$

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11. Let's us factorise.

2 + 14x

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12. Let's us factorise.

5x-20y

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13. Let's us factorise.

6x-3y

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14. Let's us factorise.

$$3a^2 - 12a$$

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15. Let us find the common factors of the following algebraic expressions.

$$6a, \ 2a^2$$

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16. Let us find the common factors of the following algebraic expressions.

5x, 6xy

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17. Let us find the common factors of the following algebraic expressions.

4xy, 12yz

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18. Let us find the common factors of the following algebraic expressions.

$7a^2b, \ 14abc$

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19. Solve:-

xy + y + 3 + 3x

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20. Solve:-

pq - q + 2p - 2

21. Solve:-

6xy + 3y + 4x + 2

22. Solve:-

10xy + 2y + 5x + 1

23. Lets us find the factor of the following algebraic expressions.

7xy

24. Lets us find the factor of the following algebraic expressions.

$9x^2y$

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25. Lets us find the factor of the following algebraic expressions.

$16ab^2c$

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26. Let us find the factor of the following algebraic expressions.

$25m^2$

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27. Lets us find the factor of the following algebraic expressions.

12x(2 + x)

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28. Lets us find the factor of the following algebraic expressions.

$$-5pq\left(p^2 + 8\right)$$

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29. Let us find the factor of the following algebraic expressions.

$$21xy^2\left(3x - 2\right)$$

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30. Lets us find the factor of the following algebraic expressions.

$$121mn\left(m^2 - n\right)$$

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31. Let us find the factor of the following algebraic expressions.

22xy, 33xz

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32. Let us find the factor of the following algebraic expressions.

$14ab^2, 21ab$

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33. Let us find the factor of the following algebraic expressions.

$-16mn, -39nl^2$

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34. Let us find the factor of the following algebraic expressions.

$12ab^2$

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35. Let us find the factor of the following algebraic expressions.

2xy, 4yz, 6xz

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36. Let us find the factor of the following algebraic expressions.

$18x^2, 27x^3, -45x$

37. Let us find the factor of the following algebraic expressions.

$5mn, 6n^2, 71m^2$

38. Let us write two such algebraic expressions which have the following as their common factors.

x^2

39. Let us write two such algebraic expressions which have the following as their common factors.

2xy

40. Let us write two such algebraic expressions which have the following as their common factors.

$4a^2$

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41. Let us write two such algebraic expressions which have the following as their common

factors.

(mn+2)

42. Let us write two such algebraic expressions which have the following as their common factors.

x(y + 2)

43. Factorise the following.

5 + 10x

44. Factorise the following.

2x - 6

45. Factorise the following.

7m - 14n

46. Factorise the following.

18xy + 21 xz

47. Factorise the following.

4xy + 6yz

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48. Factorise the following.

7xyz - 6xy

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49. Factorise the following.

$$7a^2 + 14a$$

50. Factorise the following.

-15m + 20

51. Factorise the following.

$$6a^2b + 8ab^2$$

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52. Factorise the following.

$$3a^2 - ab^2$$

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53. Factorise the following.

abc-bcd

54. Factorise the following.

$$60xy^3 + 4xy - 8$$

55. Factorise the following.

$$x^2 y^2 z^2 + x^2 y^2 z^2 q^2$$

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56. Factorise the following.

$$a^3 - a^2 + a$$

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57. Factorise the following.

$$x^2 y^2 z^2 + x^2 y^2 + x^2 y^2 q^2$$

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58. Let's factroise the following algebraic expressions.

xy + xz+ y + z

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59. Factorise the following.

ab-5b + a - 5

60. Factorise the following.

6xy - 9y + 4x-6

61. Factorise the following.

15m+9-35mn-21 n

62. Factorise the following.

ax + bx - ay -by

63. Factorise the following.

c -9 + 9ab - abc

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64. Let us factorise the following.

$$x^2 + 14x + 49$$

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65. Let us factorise the following.

$$4m^2 - 36m + 81$$

66. Let us factorise the following.

$$25x^2 + 30x + 9$$

67. Let us factorise the following.

$$121b^2 - 88bc + 16c^2$$

68. Let us factorise the following.

$$\left(x^4y^2 - 4x^2y^2\right)$$

69. Let us factorise the following.

$$a^4 + 4a^2b^2 + 4b^4$$

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70. Let us factorise the following.

$$4x^2 - 16$$

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71. Let us factorise the following.

$$121 - 36x^2$$

72. Let us factorise the following.

$$x^2y^2 - p^2q^2$$

73. Let us factorise the following.

$$80m^2 - 125$$

74. Let us factorise the following.

$$a^2x^2 - b^2y^2$$

75. Let us factorise the following.

$$1 - (m + n)^2$$

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76. Let us factorise the following.

$$(2a - b - c)^2 - (a - 2b - c)^2$$

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77. Let us factorise the following.

$$x^2 - 2xy - 3y^2$$

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78. Let us factorise the following.

$$a^2(b - c)^2 - b^2(c - a)^2$$

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79. Let us factorise the following.

$$x^2 - y^2 - 6yz - 9z^2$$

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80. Let us factorise the following.

$$x^2 - y^2 + 4x - 4y$$

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81. Let us factorise the following.

$$a^2 - b^2 + c^2 - d^2 - 2(ac - bd)$$

82. Let us factorise the following.

$$2ab - a^2 - b^2 + c^2$$

83. Let us factorise the following.

$$36x^2 - 16a^2 - 24ab - 9b^2$$

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84. Let us factorise the following.

$$a^2 - 1 + 2b - b^2$$

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85. Let us factorise the following.

$$a^2 - 2a - b^2 + 2b$$

86. Let us factorise the following.

$$\left(a^2 - b^2\right)\left(c^2 - d^2\right) - 4abcd$$

87. Let us factorise the following.

$$a^2 - b^2 - 4ac + 4bc$$

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88. Let us factorise the following.

$$3x^2 - y^2 + z^2 - 2xy - 4xz$$

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89. Let us factorise the following.

$$81x^4 - 4y^4$$

90. Let us factorise the following.

$$p^4 - 4p^2q^2 + 4q^4$$

91. Let us factorise the following.

$$x^6 - 16y^2$$

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92. Let us factorise the following.

$$x^4 + x^2 y^2 + y^4$$

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93. Let us factorise the following.

$$\left(3x^4 + 2x^2y^2 - y^4\right)$$

94. Let us factorise the following.

$$x^4 + x^2 + 1$$

95. Let us factorise the following.

$$x^4 + 6x^2y^2 + 8y^4$$

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96. Let us factorise the following.

$$3x^4 - 4x^2y^2 + y^4$$

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97. Let us factorise the following.

$$p^4 - 2p^2q^2 - 15q^4$$

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98. Let us factorise the following.

$$\left(x^8 + x^4y^4 + y^8\right)$$

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