



# MATHS

## BOOKS - VGS PUBLICATION-BRILLIANT

### FACTORISATION

#### Example

1. Express the given numbers in the form of product of primes : 48.



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2. Express the given numbers in the form of product of primes : 72.

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3. Express the given numbers in the form of product of primes : 96.

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4. Find the factors of following :  $8x^2yz$

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5. Find the factors of following :  $2xy(x+y)$



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6. Find the factors of following :  $3x + y^2z$



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7. Factorize :  $16xy + 9y^2$



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8. Factorize :  $25a^2b + 35ab^2$ .



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9. Factorise :  $9a^2 - 6a$ .



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10. Factorise :  $15a^3b - 35ab^3$ .



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11. Factorise :  $7lm - 21/mn$ .



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12. Factorise :  $3x^2 + 6x^2y + 9xy^2$ .



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13. Factorise :  $5xy + 5x + 4y + 4$ .



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14. Factorise :  $3ab + 3a + 2b + 2$ .



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15. Factorise :  $6ab - b^2 - 2bc + 12ac$ .



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16. Factorise :  $x^2 + 10x + 25$ .



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17. Factorise :  $16z^2 - 48z + 36$ .



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18.  $25p^2 - 49q^2 = \underline{\hspace{2cm}}$



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19. Factorise :  $48a^2 - 243b^2$ .



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20. Factorise :  $x^2 + 2xy + y^2 - 4z^2$ .



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21. Factorise :  $p^4 - 256$ .



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22. Factorise :  $m^2 - 4m - 21$ .



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23. Factorise :  $4x^2 + 20x - 96$ .



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1. Find the common factors of the give terims in each

:  $8x, 24$ .



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2. Find the common factors of the give terims in each

:  $3a, 21ab$ .



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3. Find the common factors of the give terims in each

:  $7xy, 35x^2y^3$ .



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4. Find the common factors of the given terms in each  
:  $4m^2$ ,  $6m^2$ ,  $8m^3$ .



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5. Find the common factors of the given terms in each  
:  $15p$ ,  $20qr$ ,  $25rp$ .



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6. Find the common factors of the give terims in each  
:  $4x^2$ ,  $6xy$ ,  $8y^2x$ .



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7. Find the common factors of the give terms in each :

$$12x^2y, 18xy^2.$$



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8. Factorise the following expressions :  $5x^2 - 25xy$



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9. Factorise the following expressions :  $9a^2 - 6ax$ .



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10. Factorise the following expressions :  $7p^2 + 49pq$ .



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11. Factorise the following expressions :

$$36a^2b - 60a^2bc.$$



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12. Factorise the following expressions :

$$3a^2bc + 6ab^2c + 9abc^2.$$



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13. Factorise the following expressions :

$$4p^2 + 5pq - 6pq^2.$$

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14. Factorise the following expressions :  $ut + at^2$ .

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15. Factorise the following :  $3ax - 6xy + 8by - 4ab$ .

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16. Factorise the following :  $x^3 + 2x^2 + 5x + 10$ .

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17. Factorise the following :  $m^2 - mn + 4m - 4n$ .

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18. Factorise the following :  $a^3 - a^2b^2 - ab + b^3$ .

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19. Factorise the following :  $p^2q - pr^2 - pq + r^2$ .



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20. Factorise the following expression :  $a^2 + 10a + 25$

.



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21. Factorise the following expression :  $l^2 - 16l + 64$ .



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22. Factorise the following expression :

$$36x^2 + 96xy + 64y^2.$$



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23. Factorise the following expression :

$$25x^2 + 9y^2 - 30xy.$$



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24. Factorise the following expression :

$$25m^2 - 40mn + 16n^2.$$



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25. Factorise the following expression :

$$81x^2 - 198xy + 121y^2.$$



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26. Factorise the following expression :

$$(x + y)^2 - 4xy.$$



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27. Factorise the following expression :

$$l^4 + 4l^2m^2 + 4m^4.$$



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28. Factorise the following :  $x^2 - 36$ .



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29. Factorise the following :  $49x^2 - 25y^2$ .



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30. Factorise the following :  $m^2 - 121$ .



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31. Factorise the following :  $81 - 64x^2$ .



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32. Factorise the following :  $x^2y^2 - 64$ .



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33. Factorise the following :  $6x^2 - 54$ .



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34. Factorise the following :  $x^2 - 81$ .

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35. Factorise the following :  $2x - 32x^5$ .

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36. Factorise the following :  $81x^4 - 121x^2$ .

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37. Factorise the following :  $(p^2 - 2pq + q^2) - r^2$ .

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**38.** Factorise the following :  $(x + y)^2 - (x - y)^2$ .



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**39.** Factorise the expressions :  $lx^2 + mx$ .



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**40.** Factorise the expressions :  $7y^2 + 35z^2$ .



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41. Factorise the expressions :  $3x^4 + 6x^3y + 9x^2z$ .



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42. Factorise the expressions :  $x^2 - ax - bx + ab$ .



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43. Factorise the expressions :  $3ax - 6ay - 8by + 4bx$ .



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44. Factorise the expressions :  $mn+m+n+1$ .

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45. Factorise the expressions :  $6ab - b^2 + 12ac - 2bc$ .

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46. Factorise the expressions :  $p^2q - pr^2 - pq + r^2$ .

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47. Factorise the expressions :  $x(y+z)-5(y+z)$ .



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48. Factorise the following :  $x^4 - y^4$ .



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49. Factorise the following :  $a^4 - (b+c)^4$ .



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50. Factorise the following :  $l^2 - (m - n)^2$ .



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51. Factorise the following :  $49x^2 - \frac{16}{25}$ .



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52. Factorise the following :  $x^4 - 2x^2y^2 + y^4$ .



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53. Factorise the following :  $4(a + b)^2 - 9(a - b)^2$ .



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54. Factorise the following expressions :

$$a^2 + 10a + 24.$$



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55. Factorise the following expressions :

$$x^2 + 9x + 18.$$



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56. Factorise the following expressions :

$$p^2 - 10p + 21.$$

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57. Factorise the following expressions :

$$x^2 - 4x - 32.$$

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58.  $70 \frac{x^4}{14x^2} = \text{-----}$

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59. Do the following Division :  $4x^3y^3z^3 : -12xyz$ .



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60. Divide  $30(a^2bc + ab^2c + abc^2)$  by  $6abc$ .



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61. Divide  $39y^3(50y^2 - 98)$  by  $26y^2(5y + 7)$ .



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62. Divide  $m^2 - 14m - 32$  by  $m + 2$ .



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63. Divide  $42(a^4 - 13a^3 + 36a^2)$  by  $7a(a-4)$ .



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64. Divide  $x(3x^2 - 108)$  by  $3x(x-6)$ .



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65. Carry out the following divisions :  $48a^3$  by  $6a$



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66. Carry out the following division :  $14x^2$  by  $42x^2$



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67. Carry out the following division :  $72a^3b^4c^5$  by  $8ab^2c^3$ .



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68. Carry out the following divisions :  $-11xy^2z^3$  by  $55xyz$ .

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69. Carry out the following divisions :  $-54l^4m^3n^2$  by  $9l^2m^2n^2$

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70. Divide the given polynomial by the given monomial :  $(3x^2 - 2x)$  divided  $x$ .

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71. Divide the given polynomial by the given monomial

:  $(5a^3b - 7ab^3)$  divided by  $ab$



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72. Divide the given polynomial by the given

monomial :  $(25x^5 - 15x^4) \div 5x^3$



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73. Divide the given polynomial by the given

monomial:  $(4l^5 - 6l^4 + 8l^3) \div 2l^2$



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**74.** Divide the given polynomial by the given monomial:  $15(a^3b^2c^2 - a^2b^3c^2 + a^2b^2c^3) \div (3abc)$

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**75.** Divide the given polynomial by the given monomial:  $(3p^3 - 9p^2q - 6pq^2) \div (-3p)$

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**76.** Divide the given polynomial by the given monomial:  $((2/3)a^2b^2c^2 + (4/3)ab^2c^2) \div (1/2abc)$



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77. Workout the following divisions :  $(49x-63) \div 7$



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78. Workout the following divisions :  $12x(8x-20) \div 4(2x-5)$ .



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79. Workout the following divisions :  
 $11a^3b^3(7c - 35) \div (3a^2b^2(c - 5))$ .



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80. Workout the following divisions :

$$54mnl(l + m)(m + n)(u + l) \div (81mn(l + m)(n + l))$$



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81. Workout the following divisions :  $36(x+4)$

$$(x^2 + 7x + 10) \div 9(x+4).$$



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**82.** Workout the following divisions :  $a(a+1)(a+2)(a + 3) \div a(a + 3)$

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**83.** Factorize the expressions and divide them as directed :  $(x^2 + 7x + 12) \div (x+3)$ .

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**84.** Factorize the expressions and divide them as directed :  $(x^2 - 8x + 12) \div (x-6)$ .

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**85.** Factorize the expressions and divide them as directed :  $(p^2 + 5p + 4) \div (p+1)$ .



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**86.** Factorize the expressions and divide them as directed :  $15ab(a^2 - 7a + 10) \div 3b(a-2)$ .



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**87.** Factorize the expressions and divide them as directed :  $15lm(2p^2 - 2q^2) \div 3l(p+q)$ .



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**88.** Factorize the expressions and divide them as directed :  $26z^3(32z^2 - 18) \div 13z^2(4z - 3)$ .



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**89.** Srilekha solved the given equation as shown below .  $3x+4x+x+2x=90$ ,  $9x= 90$  Therefore  $x= 10$ , What could say about the correctness of the solution? Can you identify where Srilekha has gone wrong?



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90. Abraham did the following for  $x=-4$ ,  $7x=7-4=-3$



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91. Harmeet does the division as  $(a+5) \div 5 = a+1$ , His friend Srikar done the same  $(a+5) \div 5 = \frac{a}{5} + 1$ , and his friend Rosy did it this way  $(a+5) \div 5 = a$ , can you guess who has done it correctly? Justify.



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92. Find the errors and correct the following mathematical sentences :  $3(x-9) = 3x-9$ .



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**93.** Find the errors and correct the following mathematical sentences :  $x(3x + 2) = 3x^2 + 2$ .



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**94.** Find the errors and correct the following mathematical sentences :  $2x+3x = 5x^2$ .



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95. Find the errors and correct the following mathematical sentences :  $2x+x+3x = 5x$ .

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96. Find the errors and correct the following mathematical sentences :  $4p+3p+2p+p-9p=0$

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97. Find the errors and correct the following mathematical sentences :  $3x + 2y = 6xy$

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**98.** Find the errors and correct the following mathematical sentences :  $(3x)^2 + 4x + 7 = 3x^2 + 4x + 7$ .

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**99.** Find the errors and correct the following mathematical sentences :  $(2x)^2 + 5x = 4x + 5x = 9x$ .

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100. Find the errors and correct the following mathematical sentences :  $(2a + 3)^2 = 2a^2 + 6a + 9$ .

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101. Substitute  $x=-3$  in :  $x^2 + 7x + 12 =$   
 $(-3)^2 + 7(-3) + 12 = 9+4+12=25$

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102. Substitute  $x=-3$  in :  $x^2 - 5x + 6 =$   
 $(-3)^2 - 5(-3) + 6 = 9-15+6=0$

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**103.** Substitute  $x=-3$  in :  $x^2 + 5x - (-3)^2 + 5(-3) + 6$   
 $= -9 - 15 = -24$



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**104.** Find the errors and correct the following mathematical sentences :  $(x - 4)^2 = x^2 - 16$ .



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**105.** Find the errors and correct the following mathematical sentences :  $(x + 7)^2 = x^2 + 49$ .



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**106.** Find the errors and correct the following mathematical sentences :  $(3a + 4b)(a - b) 3a^2 - 4a^2$ .



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**107.** Find the errors and correct the following mathematical sentences :  $(x+4)(x+2) = x^2+8$ .



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**108.** Find the errors and correct the following mathematical sentences :  $5x^3 \div 5x^3 = 0$ .

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**109.** Find the errors and correct the following mathematical sentences :  $2x^3 + 1 \div 2x^3 = 1$

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**110.** Find the errors and correct the following mathematical sentences :  $3x + 2 \div 3x = \frac{2}{3x}$

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111. Find the errors and correct the following mathematical sentences :  $3x + 5 \div 3 = 5$

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112. Find the errors and correct the following mathematical sentences :  $\frac{4x + 3}{3} = x + 1$

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113.  $a^2 - 2ab + b^2 = \underline{\quad}$

A.  $(a - b)^2$

B.  $(a + b)^2$

C.  $a^2 - b^2$

D.  $(a + b)(a - b)$

**Answer:**



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**114.**  $2 \times 2 \times 2 \times 2 \times 2 \times 3$  is a prime factorisation of

A. 48

B. 72



C. 96

D. 84

**Answer:**



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**115.** Common factors of  $6xy$ ,  $9y^2$

A. 3,  $y$

B. 6,  $y^2$

C. 3,  $y^2$

D. 3,  $x$ ,  $y$

**Answer:**



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**116.** Factorise :  $15a^3b - 35ab^3$

A.  $5(a^3b - 7ab^3)$

B.  $5ab(3a^2 - 7b^2)$

C.  $5a^2b(3a^2 - 7b^2)$

D.  $5ab(3a^2 - 7b)$

**Answer:**



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117. Factorise :  $ax + ay + bx + by$

A.  $(x + a)(y + b)$

B.  $(x + y)(a + b)$

C.  $(x + b)(y + a)$

D.  $(xy + ab)$

**Answer:**



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118. Factorisation of :  $x^2 + 10x + 25$

A.  $(x + 5)(x + 5)$

B.  $(x + 2)(x + 5)$

C.  $(x + 5)(x + 3)$

D.  $(x + 4)(x + 5)$

**Answer:**



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**119.**  $25p^2 - 49q^2 = \underline{\hspace{2cm}}$

A.  $(5p + 7q)^2$

B.  $(5p - 7q)^2$

C.  $(5p + 7q)(7q - 5p)$

D.  $(5p + 7q)(5p - 7q)$

**Answer:**



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**120.**  $(p + 4)(p - 4)(p^2 + 16) = \underline{\hspace{2cm}}$

A.  $p^4 - 256$

B.  $p^2 - 128$

C.  $(5p + 7q)(5p - 7q)$

D.  $p^8 - 256$

**Answer:**



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**121.** Factors of  $x^2 + x(a + b) + ab = \dots\dots\dots$

A.  $(x + a)(x - b)$

B.  $(x + a)(x + b)$

C.  $p^2 - 256$

D.  $(x - 3)(x + b)$

**Answer:**



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122.  $48a^2 + 243b^2 = \underline{\hspace{2cm}}$

A.  $3(4a + 9b)(4a - 9b)$

B.  $3(4a + 9b)$

C.  $(x - a)(x - b)$

D. none

**Answer:**



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123. Factorise :  $m^2 - 4m - 21$ .

A.  $(m + 3)^2$

B.  $(m + 7)(m - 31)$

C.  $3(3a + 4b)(4a - 9b)$

D.  $(m - 7)(m + 3)$

**Answer:**



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**124. Factorise :  $4x^2 + 20x - 96$ .**

A.  $(x + 8)(x - 3)$

B.  $4(x + 8)(x - 3)$



C.  $(m - 7)^2$

D.  $(x - 3)^2$

**Answer:**



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125.  $70 \frac{x^4}{14x^2} = \text{----}$

A.  $5x$

B.  $5x^{-3}$

C.  $(x - 8)(x + 3)$

D.  $5x^2$

**Answer:**



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126.  $(6a^2 + 30a) / (a + 5) = \underline{\hspace{2cm}}$

A.  $6a$

B.  $3a$

C.  $\frac{x^2}{2}$

D.  $a$

**Answer:**



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127.  $\frac{6x^4 + 10x^3 + 8x^2}{2x^2} = \text{----}$

A.  $3x^2 - 5x + 1$

B.  $3x^2 + 5x + 4$

C.  $\frac{a}{3}$

D.  $x^2 + 5x + 1$

**Answer:**



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128. Divide  $30(a^2bc + ab^2c + abc^2)$  by  $6abc$ .

A.  $5(a + b + c)$

B.  $6(a + b)$

C.  $x^2 - 5x + 11$

D.  $3(a - b)$

**Answer:**



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**129.** Divide  $x(3x^2 - 108)$  by  $3x(x-6)$ .

A.  $x - 3$

B.  $6 + x$

C.  $a + b + c$

D.  $6 - x$

**Answer:**



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130.  $(m^2 - 14m - 32) \frac{\quad}{m + 2} = \text{---}$

A.  $m - 3$

B.  $m + 6$

C.  $x + 6$

D.  $m - 16$

**Answer:**



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**131. Factorise :  $16z^2 - 48z + 36$ .**

A.  $4(2z - 3)^2$

B.  $(2z - 3)^2$

C.  $m - 6$

D. None

**Answer:**



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132.  $3x^2 + 6x^2y + 9xy^2 = \underline{\hspace{2cm}}$

A.  $3x(x - 2y)$

B.  $3(2x + 3xy)$

C.  $(4z - 3)^2$

D.  $3x(x + 2xy + 3y^2)$

**Answer:**



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133.  $25a^2b + 35ab^2 = \underline{\hspace{2cm}}$

A.  $5ab(5a + 7b)$

B.  $5ab(a - 2b)$

C.  $3x(x + y)$

D.  $5a^2b^2(a - b)$

**Answer:**



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**134.**  $6ab + 12b = \underline{\hspace{2cm}}$

A.  $6(a + 2)$

B.  $6b(a + 2)$



C.  $5ab(a - b)$

D.  $b(a - z)$

**Answer:**



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**135.** Prime factorisation of 72 is \_\_?

A.  $2^3 \times 3^2$

B.  $3^2 \times 2$

C.  $ab - 6$

D.  $8 \times 16^2$

**Answer:**



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136.  $\frac{0}{36}(x - 4) = \underline{\hspace{2cm}}$

A. 0

B. 6

C.  $3 \times 9^2$

D. 10

**Answer:**



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137.  $(x + 3)(x + 6) = \underline{\hspace{2cm}}$

A.  $x^2 - 3x$

B.  $x^2 + 9x + 18$

C.  $x - 3x^2$

D. None

**Answer:**



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138.  $11xy^2z^3 / 55xyz = \underline{\hspace{2cm}}$

A. A.)  $x / y^2$

B. B.)  $5z / x$

C. C.)  $y / z$

D. D.)  $yz^2 / 5$

**Answer:**



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**139.**  $|x^2 + mx = \underline{\hspace{2cm}}$

A.  $x^2 (m + x)$

B.  $x (lx + m)$

C.  $x + lm$

D.  $l(x + m)$

**Answer:**



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**140.** Expansion form of  $(l - 8)^2 = \text{----}$

A. A.)  $l^2 - 16l + 64$

B. B.)  $l^2 - 8l + 8$

C. C.)  $l - 16l^2 + 0$

D. D.)  $l^2 - 16$

**Answer:**



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**141.** The Value of  $81^2 - 3^8 = \underline{\quad}$

A. A.) 81

B. B.) 16

C. C.) 0

D. D.) 24

**Answer:**



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142.  $x^2 - 2 + \frac{1}{x^2} = \text{----}$

A.  $(x - 1/x)^2$

B.  $(1/x - 3)^2$

C.  $(3x - (1/x))^2$

D. None

**Answer:**



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143. The Value of  $(a + b)^3 - 3ab(a + b) = \text{----}$

A. A.)  $a^3 + b^3$

B. B.)  $a^3 - b^3$

C. C.)  $a - b^3$

D. D.)  $3a - b$

**Answer:**



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**144.** The Value of  $(8.47 \times 8.47 - 1.53 \times 1.53)$

$/6.94 = \underline{\quad}$

A. A.) 16



B. B.) 10

C. C.) 30

D. D.) 11

**Answer:**



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145.  $(3x - 2y)^2 - (3x - 2y)^2 = \underline{\quad}$

A.  $2xy^2$

B.  $7y^2$

C.  $9x^2$

D. 0

**Answer:**



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**146.**  $4x + 1$  is a factor of \_\_\_\_\_

A.  $x^2 - 16$

B.  $16x - 3$

C.  $10x - 3$

D.  $16x^2 - 1$

**Answer:**



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147.  $(2a + 1) \left( \frac{1}{2a - 1}, -\frac{2}{4a^2 - 1} \right) = \text{---}$

A. -1

B. -3

C. 1

D. 2

**Answer:**



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148.  $x^2 - 7 =$

A. a)  $(x + 7)(x - 7)$

B. b)  $(x + \sqrt{7})(x - \sqrt{7})$

C. c)  $(x - 3)(x + 4)$

D. d) None

**Answer:**



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149.  $x + \frac{1}{x} = 6$  then  $x^2 + \frac{1}{x^2} = \text{---}$

A. 19

B. 16

C. 34

D. 10

**Answer:**



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**150.**  $x=2, x^4 + (1/x^4)$

A. 16.06

B. 257

C. 107

D. 192

**Answer:**



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**151.**  $a^4 - 81 = \underline{\hspace{2cm}}$

A.  $(a - 3)(a + 3)(a^2 + 9)$

B.  $(a - 3)^2(a^2 + 1)$

C.  $(a - 3)^4(a + 1)$

D. None

**Answer:**



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**152.**  $7a(5x - 3y) + 5b(5x - 3y) = \underline{\hspace{2cm}}$

A.  $(5x - 3)(7a - 5)$

B.  $(5x - 3y)(7a + 5b)$

C.  $(5x - 3)(4x - 1)$

D.  $(5x - y)(7x - 3)$

**Answer:**



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153.  $ar + br + at + bt = \underline{\quad}$

A.  $(r + t)(b + a)$

B.  $(r - t)(r + a)$

C.  $(r + t)(r + a)$

D.  $(r - t)(a - b)$

**Answer:**



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154.  $(6 + p + q)(6 - p - q) = \underline{\quad}$



A.  $36 - p^2 - q^2 - 2pq$

B.  $36 - 2p + q$

C.  $36 - 2p - 2q$

D.  $36 - p^2 - q^2$

**Answer:**



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**155.**  $9x^2 - 256 = \underline{\quad}$

A.  $(3x + 16)^2$

B.  $(3x + 16)(3x - 16)$

C.  $(3x - 6)^2$

D.  $(x - 16)(3x - 1)$

**Answer:**



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**156.**  $(3a - b)^2 - 9c^2 = \underline{\hspace{2cm}}$

A.  $(3a + b)(3c - b)$

B.  $(3a - b + 3c)(3a - b - 3c)$

C.  $(3a - b - c)^2$

D.  $(3a - b - 3c)(a - b)$

**Answer:**



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157.  $(8 + x)(14 - x) = \underline{\hspace{2cm}}$

A.  $121 - (x - 3)^2$

B.  $12 - (x - 3)^2$

C.  $12 - (x - 31)^2$

D.  $11 - (x - 12)^2$

**Answer:**



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158. Factorise the following :  $x^4 - y^4$ .

A.  $(x - y)^2 - xy$

B.  $(x + y) (x - y^2)$

C.  $(x^2 + y^2) (x^2 - y^2)$

D.  $(x + y^2) (x^2 + y)$

**Answer:**



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159.  $(4x + 51y + 1) (4x + 51y - 1)$  \_\_\_

A.  $(4x - 5y)^2$

B.  $(4x - 5)^2$

C.  $(3x - y)^2$

D. None

**Answer:**



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160.  $(x - y) / (\sqrt{x} - \sqrt{y}) = \text{----}$

A.  $\sqrt{x} + \sqrt{y}$

B.  $\sqrt{x} - y$

C.  $x - \sqrt{y}$

D.  $1 - y$

**Answer:**



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**161.**  $\left(\frac{3001}{6}\right)^2 - \left(\frac{2999}{6}\right)^2 = \text{---}$

A.  $\frac{3331}{3}$

B.  $\frac{3431}{2}$

C.  $243 \frac{1}{2}$

D.  $712 \frac{1}{2}$

**Answer:**



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**162.**  $2^4 \times 3 = \underline{\quad}$

A. 481

B. 48

C. 78

D. 92

**Answer:**



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**163.**  $3 + 2(9) = \underline{\quad}$

A. 11

B. 21

C. 16

D. 19

**Answer:**



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**164.**  $2^5 \times 3 = \underline{\quad}$



A. 90

B. 31

C. 96

D. 69

**Answer:**



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**165.** Identify true statement.

A.  $3(x - 1) = 7$

B.  $3(x - 4) = 3x - 3$

C.  $(x - 1)^2 = 9$

D.  $x^2 - 3xy$

**Answer:**



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**166.**  $(x + 8)^2 = x^2 + \_ + 64$

A.  $6x$

B.  $4x$

C.  $16x$

D.  $\frac{x}{4}$

**Answer:**



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**167.**  $(b + 1)(3a + 2) = \underline{\hspace{2cm}}$

A.  $3ab - 2b + 1$

B.  $3ab - 2$

C.  $3ab + 2$

D.  $3ab + 3a + 2b + 2$

**Answer:**



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168.  $(a^2 + 5) + a^2 + 5 = \underline{\hspace{2cm}}$

A. 4

B. 5

C. 1

D. 2

**Answer:**



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169. Common factors of  $8x$ ,  $24$  are

A. 1, 2, x

B. 2, 4, x

C. 2, 4, 8

D. 8, 4, 3

**Answer:**



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**170.**  $(m - n)(m + 4) = \underline{\hspace{2cm}}$

A.  $m^2 - n$

B.  $m^2 - mn + 4m - 4n$

C.  $m + n^2$

D.  $m^2 - 4mn + 1$

**Answer:**



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**171.**  $t(u + at) = \underline{\hspace{2cm}}$

A.  $ut + at^2$

B.  $t + at^2$

C.  $t - at^2$

D.  $ut - t^2$

**Answer:**



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172.  $(49x - 63) + 7 = \underline{\quad}$

A.  $7x + 1$

B.  $7x - 9$

C.  $x + 3$

D.  $x - 79$

**Answer:**



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173.  $x - y = \underline{\hspace{2cm}}$

A.  $x\sqrt{y} - 1$

B.  $(\sqrt{x} - \sqrt{y})(\sqrt{x} + \sqrt{y})$

C.  $(x - \sqrt{y})(x - \sqrt{y})$

D.  $(\sqrt{x} - y)^2$

**Answer:**



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174.  $a^2 - b^4 = \underline{\hspace{2cm}}$



A.  $(a - b)(a - b^2)$

B.  $(a + b)(a + 1)$

C.  $(a - b)(a^2 - 1)$

D. None

**Answer:**



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**175.**  $(x + 2)(x^2 + 5) = \underline{\hspace{2cm}}$

A.  $x^3 + 2x^2 + 5x + 10$

B.  $x^3 - x^2 - 5x + 1$

C.  $x^3 - 7x^2 + 3$

D.  $x^3 - 3x + 7$

**Answer:**



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**176.**  $14x^3 + 42x^2 = \underline{\hspace{2cm}}$

A.  $3/x$

B.  $1/x$

C.  $\frac{3}{x}$

D.  $x/3$

**Answer:**



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177. If we divide  $x^2 a - 1$  by  $x^a - 1$  we get \_\_\_

A.  $x - 1$

B.  $x^a - 1$

C.  $x + a$

D.  $x^a + 1$

**Answer:**



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178. If  $x^2 + \left(\frac{1}{-x^2}\right) = 62$  then  $x + \frac{1}{x} = \underline{\hspace{1cm}}$  ( $x + \frac{1}{x} >$

0)

A. 3

B. 8

C. 4

D. 6

**Answer:**



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179.  $x^4 - 1 + x - 3 = \underline{\hspace{1cm}}$

A.  $x^3 - 1$

B.  $x + 1$

C.  $(x - 2)^2$

D. None

**Answer:**



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180.  $18a^2b^2 \frac{c}{-6abc} = \text{-----}$

A.  $-3ab$

B.  $-(ab/c)$

C.  $abc^2$

D.  $ab$

**Answer:**



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**181.** The degree of a polynomial is 6 and the degree of other polynomial is 2 then the degree of the sum of the both polynomials is \_\_\_\_

A. 2

B. 4

C. 8

D. 6

**Answer:**



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**182.**  $(9x^2 - 12x - 12) \div (3x + 2) = \underline{\hspace{2cm}}$

A.  $3x + 1$

B.  $3x - 6$

C.  $6x - 1$

D.  $6x - 3$

**Answer:**



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