



# MATHS

## BOOKS - VGS PUBLICATION-BRILLIANT

### ALGEBRAIC EXPRESSIONS

#### Example

1. Find the number of terms in following algebraic expressions.  $5xy^2$ ,  $5xy^3-9x$ ,  $3xy + 4y - 8$ ,  $9x^2+2x+pq+q$ .



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2. Take different values for  $x$  and find values of  $3x + 5$ .



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3. Find the like terms in the following:  $ax^2y$ ,  $2x$ ,  $5y^2$ ,  $-9x^2$ ,  $-6x$ ,  $7xy$ ,  $18y^2$ .



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4. Write 3 like terms for  $5pq^2$



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5. Add  $5x^2 + 3xy + 2y^2$  and  $2y^2 - xy + 4x^2$ .



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6. Sheela says the sum of  $2pq$  and  $4pq$  is  $8p^2q^2$   
is she right ? Give your explanation.



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7. Rehman added  $4x$  and  $7y$  and got  $11xy$ . Do you agree with Rehman?



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8. Subtract  $2xy + 9x^2$  from  $12xy + 4x^2 - 3y^2$ .



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9. If  $A = 2y^2 + 3x - x^2$ ,  $B = 3x^2 - y^2$  and  $C = 5x^2 - 3xy$

then find  $A+B$



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10. If  $A = 2y^2 + 3x - x^2$ ,  $B = 3x^2 - y^2$  and  $C = 5x^2 - 3xy$

then find  $A-B$



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11. If  $A = 2y^2 + 3x - x^2$ ,  $B = 3x^2 - y^2$  and  $C = 5x^2 - 3xy$

then find  $B+C$



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12. If  $A = 2y^2 + 3x - x^2$ ,  $B = 3x^2 - y^2$  and  $C = 5x^2 - 3xy$

then find  $B-C$



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**13.** If  $A = 2y^2 + 3x - x^2$ ,  $B = 3x^2 - y^2$  and  $C = 5x^2 - 3xy$

then find  $A+B+C$



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**14.** If  $A = 2y^2 + 3x - x^2$ ,  $B = 3x^2 - y^2$  and  $C = 5x^2 - 3xy$

then find  $A+B-C$



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**15.** Write an algebraic expression using speed and time to calculate the distance simple interest to be paid, using principal, time and the rate of simple interest.



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**16.** Can you think of two more such situations, where we can express in algebraic expressions?



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17. Complete the table.

Sl No.	Shape	No.of lines of symmetry
1.	Equilateral triangle	
2.	Isosceles triangle	
3.	Scalene triangle	
4.	Rhombus	
5.	Hexagon	
6.	Circle	



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18. Check whether you always get a monomial when two monomials are multiplied.



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**19.** Product of two monomials is a monomial ?

You can check this.



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**20.** Find the product of  $(-4xy)(2x - y)$ .



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21. Find the product of  $(3m-2n^2)(-7mn)$ .



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22. Find the product:  $3x(4ax + 8by)$



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23. Find the product:  $4a^2b(a - 3b)$



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24. Find the product:  $(p + 3q^2) pq$



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25. Find the product:  $(m^3 + n^3) 5mn^2$ .



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26. Find the number of maximum terms in the product of a monomial and a binomial?



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**27.** Simplify:  $4y(3y + 4)$



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**28.** Simplify  $x(2x^2 - 7x + 3)$  and find the values of it for  $x = 1$ .



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**29.** Simplify  $x(2x^2 - 7x + 3)$  and find the values of it for  $x = 0$ .



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**30.** Add the product:  $a(a-b)$ ,  $b(b-c)$ ,  $c(c-a)$ .



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**31.** Add the product:  $x(x+y-r)$ .



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**32.** Subtract the product of  $2x(5x-y)$  from product of  $3x(x + 2y)$ .



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**33.** Subtract  $3k(5k-l+3m)$  from  $6k(2k +3l-2m)$ .



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**34.** Simplify:  $a^2(a-b+c) + b^2(a+b-c) - c^2(a-b-c)$ .



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**35.** Find the product:  $(a - b)(2a + 4b)$



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**36.** Find the product:  $(3x + 2y)(3y - 4x)$ ,



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**37.** Find the product:  $(2m - l)(2l - m)$ ,





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**38.** Find the product:  $(k+3m)(3m-k)$ .



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**39.** How many number of maximum terms will be there in the product of two binomials?



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**40.** Multiply the binomials:  $2a-9$  and  $3a +4$ .



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**41.** Multiply the binomials:  $x-2y$  and  $2x - y$



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**42.** Multiply the binomials:  $kl+ lm$  and  $k-l$



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**43.** Multiply the binomials:  $m^2 - n^2$  and  $m + n$



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**44.** Find the product:  $(x + y)(2x - 5y + 3xy)$



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**45.** Find the product:  $(a - 2b + 3c)(ab^2 - a^2b)$



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46. Find the product:  $(mn - kl + km)(kl - lm)$



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47. Find the product:  $(p^3 + q^3)(p - 5q + 6r)$



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48. Simplify the following:  $(x - 2y)(y - 3x) + (x + y)(x - 3y) - (y - 3x)(4x - 5y)$ .



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49. Simplify the following:  $(m+n) (m^2-mn+n^2)$ .



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50. Simplify the following:  $(a-2b+5c) (a-b)-(a-b-c)$

$(2a + 3c) + (6a + b) (2c-3a-5b)$



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51. Simplify the following:  $(pq - qr + pr)(pq + qr) - (pr + pq)(p + q - r)$ .



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52. If  $a, b, c$  are positive real numbers such that

$\frac{a + b - c}{c} = \frac{a - b + c}{b} = \frac{-a + b + c}{a}$ , find the value of  $\frac{(a + b)(b + c)(c + a)}{abc}$



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**53.** Taking  $a, b, c$  as positive integers, verify the following whether they are identities or not?

$$(a - b)^2 = a^2 - 2ab + b^2$$



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**54.** Taking  $a, b, c$  as positive integers, verify the following whether they are identities or not?

$$(a+b)(a-b) = a^2 - b^2$$



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55. Taking  $a, b, c$  as positive integers, verify the following whether they are identities or not?

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca.$$



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56. Now take  $x=2, a=1$  and  $b=3$ , verify the identity  $(x + a)(x+b) = x^2 + (a+b)x + ab$ . What do you observe? Is  $LHS=RHS$ ?



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57. Now take  $x=2$ ,  $a= 1$  and  $b = 3$ , verify the identity  $(x + a) (x+b)=x^2+ (a+b)x+ab$ . What do you observe? Is  $LHS=RHS$ ?



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58. Now take  $x=2$ ,  $a= 1$  and  $b = 3$ , verify the identity  $(x + a) (x+b)=x^2+ (a+b)x+ab$ . Is it always  $LHS =RHS$  for all values of  $a$  and  $b$ ?



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**59.** Consider  $(x+p)(x+q) = x^2 + (p+q)x + pq$ . Put  $q$  instead of 'p' what do you observe?



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**60.** Consider  $(x+p)(x+q) = x^2 + (p+q)x + pq$ . Put  $q$  instead of 'p' what do you observe?



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**61.** Consider  $(x+p)(x+q) = x^2 + (p+q)x + pq$ . Put  $q$  instead of 'p' what do you observe?



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## Exercise

**1.** Find the product of  $5x$ ,  $6y$  and  $7z$ .



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2. Find  $3x^2y \times 4xy^2 \times 7x^3y^3$



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3. Find the product of  $3x, -4xy, 2x^2, 3y^2, 5x, 3y^2$



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4. Find the product of the following pairs:(i)  $6,$   
 $7k,$



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5. Find the product of the following pairs:

$-3l, -2m,$



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6. Find the product of the following pairs:  $-5t^2$

$, -3t^2$



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7. Find the product of the following pairs:  
 $6n, 3m$



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8. Find the product of the following pairs:  
 $-5p^2$   
 $-2p$



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9. Find the product of the following monomials:  $xy$ ,  $x^2y$ ,  $xy$ ,  $x$



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10. Find the product of the following monomials :  $a$ ,  $b$ ,  $ab$ ,  $a^3b$ ,  $ab^3$



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**11.** Find the product of the following monomials :kl, lm, klm, klm



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**12.** Find the product of the following monomials :pq, pqr, r



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13. Find the product of the following monomials :  $-3a, 4ab, -6c, d$



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14. If  $A = xy, B = yz$  and  $C = zx$ , then find  $ABC = \_$



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15. If  $P = 4x^2, T = 5x$  and  $R = 5y$ , then  $\frac{PTR}{100}$

= \_\_\_\_\_



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**16.** Write some monomials of your own and find their products.



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**17.** Find  $(3x + 4y)^2$ .



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18. Find  $204^2$ .



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19. Find:  $(5m + 7n)^2$



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20. Find:  $(6kl + 7mn)^2$



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21. Find:  $(5a^2+6b^2)^2$



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22. Find:  $302^2$



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23. Find:  $807^2$



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24. Find:  $704^2$



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25. Verify the identity:  $(a - b)^2 = a^2 - 2ab + b^2$ ,

where  $a = 3m$  and  $b = 5n$ .



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26. Compute  $(3m - 2n)^3$



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27. Find  $196^2$



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28. Find :  $(9m - 2n)^2$



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29. Find :  $(6pq-7rs)^2$



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30. Find :  $(5x^2 - 6y^2)^2$



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31. Find :  $292^2$



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32. Find:  $807^2$



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33. Find :  $794^2$



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34.  $(4x + 5y)(4x - 5y) = \underline{\hspace{2cm}}$



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35. Find  $407 \times 393$



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36.  $987^2 - 13^2 = \underline{\hspace{2cm}}$



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37. Find:  $(6m+7n)(6m-7n)$



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38. Find :  $(5a + 10b)(5a-10b)$



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39. Find :  $(3x^2 + 4y^2) (3x^2 - 4y^2)$



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40.  $106 \times 94 = \underline{\quad}$



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41. Find :  $592 \times 608$



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42.  $92^2 - 8^2 = \underline{\hspace{2cm}}$



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43. Find :  $984^2 - 16^2$



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44. Find:  $302 \times 308$



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**45.** Find:  $93 \times 104$



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**46.** Select a suitable identity and find the following products:  $(3k+4l)(3k+4l)$



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**47.** Select a suitable identity and find the following products:  $(ax^2 + by^2)(ax^2 + by^2)$



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**48.** Select a suitable identity and find the following products:  $(7d-9e)(7d-9e)$



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**49.** Select a suitable identity and find the following products:  $(m^2 - n^2)(m^2 + n^2)$



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**50.** Select a suitable identity and find the following products:  $(3t + 9s)(3t - 9s)$



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51. Select a suitable identity and find the following products:  $(kl - mn)(kl + mn)$



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52. Select a suitable identity and find the following products:  $(6x + 5)(6x + 6)$



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**53.** Select a suitable identity and find the following products:  $(2b-a)(2b+c)$



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**54.** Evaluate the following by using suitable identities:  $304^2$



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**55.** Evaluate the following by using suitable identities: $509^2$



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**56.** Evaluate the following by using suitable identities: $992^2$



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57. Evaluate the following by using suitable identities:  $799^2$



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58. Evaluate the following by using suitable identities:  $204 \times 206$



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**59.** Evaluate the following by using suitable identities:  $83 \times 77$



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**60.** Evaluate the following by using suitable identities:  $109 \times 108$



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**61.** Evaluate the following by using suitable identities:  $204 \times 206$



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**62.** Verify the identity  $(a + b)^2 = a^2 + 2ab + b^2$  geometrically by taking  $a = 3$  and  $b = 2$ .



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**63.** Verify the identity  $(a + b)^2 = a^2 + 2ab + b^2$

geometrically by taking:  $a=2$  units,  $b = 4$  units



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**64.** Verify the identity  $(a + b)^2 = a^2 + 2ab + b^2$

geometrically by taking:  $a = 3$  units,  $b = 1$  unit



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**65.** Verify the identity  $(a + b)^2 = a^2 + 2ab + b^2$

geometrically by taking:  $a = 5$  units,  $b = 2$  units



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**66.** Verify the identity  $(a + b)^2 = a^2 + 2ab + b^2$

geometrically by taking:  $a = 3$  units,  $b = 1$  unit



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**67.** Verify the identity  $(a - b)^2 = a^2 - 2ab + b^2$  geometrically by taking : a= 5 units, b = 2 units.



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**68.** Verify the identity  $(a+b)(a-b) = a^2 - b^2$  geometrically by taking a =3 units, b=2 units



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69. Verify the identity  $(a+b)(a-b)=a^2-b^2$

geometrically by taking  $a=2$  units,  $b=1$  unit.



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70. Which of the following is a monomial?

A.  $2x + 3$

B.  $-\left(\frac{3}{4}\right)xy$

C.  $cx^2 + dx + e$

D.  $\left(\frac{5}{7}\right)x - \left(\frac{2}{3}\right)y$



**Answer:**



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71. The degree of  $4xy^2z^3$

A. 4

B. 2

C. 6

D. 3

**Answer:**



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72. The degree of  $3x^2 - 5 + 7x^3 - 6x^5$

A. 5

B. 3

C. 2

D. -6

**Answer:**



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73. If  $A = 5x^2 + 3xy + 2y^2$ ,  $B = -2y^2 - 3xy + 4x^2$  then  $A + B$  \_\_

A.  $9x^2 + 6xy$

B.  $4y^2$

C.  $x^2 + 4y + 6xy$

D.  $9x^2$

**Answer:**



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74. Which of the following are like terms-

A.  $2t, 5\frac{t}{2}, -\left(6\frac{s}{7}\right)$

B.  $x, 2x^2, -7x, 8x^3$

C.  $6p, -7p, (5 / 2)p$

D.  $2y, -\left(\frac{7}{3}\right)x, 5t$

**Answer:**



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75.  $5x \times (-3y) =$

A.  $-15xy$

B.  $-15x^2y$

C.  $15xy$

D.  $2xy$

**Answer:**



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76. The product of  $5x$ ,  $6y$  and  $7z$

A.  $210(x + y + z)$

B.  $210xyz$

C.  $18xyz$

D.  $18(x + y + z)$

**Answer:**



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77.  $(a + b)^2 - (a - b)^2 =$

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

B.  $a^2 + b^2$

C.  $4ab$

D.  $0$

**Answer:**



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78. The formula involved in the product of  $302 \times 298$

A.  $(a + b)^2$

B.  $(a - b)^2$

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

D. None

**Answer:**



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79. Find the product of  $(3m-2n^2)(-7mn)$ .

A.  $-21m^2n - 14m^2$

B.  $21m^2n - 14m^2$

C.  $-21mn^2 - 14m^2$

D.  $-21m^2n - 4mn^3$

**Answer:**



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80.  $5x(6y + 3) = \underline{\hspace{2cm}}$

A.  $30x + 15$

B.  $30x - 15y$

C.  $30x + 15$

D.  $30xy + 15x$

**Answer:**



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**81.** Product of two monomials is a monomial ?

You can check this.

A. Binomial

B. Monomial

C. 0

D. 4

**Answer:**



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**82.**  $(5x + 6y)(3x - 2y) = \underline{\hspace{2cm}}$

A.  $8x^2 - 8xy$

B.  $15x^2 + 3xy$

C.  $15x^2 - xy$

D.  $15x^2 + 8xy - 12y^2$

**Answer:**



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**83.** Find the number of maximum terms in the product of a monomial and a binomial?

A. 10

B. 9

C. 6

D. 7

**Answer:**



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**84.**  $(a + b)^2$

A.  $a^2 + b^2$

B.  $a^2 - b^2$

C. 7

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

**Answer:**



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**85.** The symbol used for an equation identity is

----

A. =

B.  $\approx$

C. (pic)

D. =

**Answer:**



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**86.**  $(a + b) (a - b) = \underline{\hspace{2cm}}$

A.  $a^2 - b$

B.  $b^2 - a^2$

C.  $a^2 - b^2$

$$D. a - b^2$$

**Answer:**



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**87.**  $(a - b)^2 = \text{----}$

A.  $a^2 - 2ab + b^2$

B.  $a^2 - ab + b^2$

C.  $a^2 - 2a + b^2$

D.  $a^2 - 2ab + b^2$



**Answer:**



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**88.**  $(x + a)(x + b) = \underline{\hspace{2cm}}$

A.  $x^2 + (a + b)x + ab$

B.  $x^2 - (a - b)x - ab$

C.  $x^2 - ab$

D.  $x + ab$

**Answer:**



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89. If the equation is true for all values of the variables then it is called an \_\_\_\_\_

A. Equation

B. Identity

C. Product

D. None

**Answer:**



90. The formula used in the product of  $96 \times 104$  is \_\_\_\_\_

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

B.  $(a - b)^2$

C.  $(a + b)^2$

D.  $a^2 - b$

**Answer:**



91. The formula used in the product of  $196^2$  is

---

A.  $(a + b)^2$

B.  $(a - b)^2$

C.  $a^2 - b$

D.  $a - b^2$

**Answer:**



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$$92. 987^2 - 13^2 = \underline{\hspace{2cm}}$$

A. 974000

B. 79400

C. 14000

D. 14009

**Answer:**



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93.  $(4x + 5y)(4x - 5y) = \underline{\hspace{2cm}}$

A.  $x^2 - 16y^2$

B.  $16x^2 - y^2$

C.  $16x - 25$

D.  $16x^2 - 25y^2$

**Answer:**



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94.  $(a - b)^2 - (a - b)^2 = \underline{\hspace{2cm}}$

A.  $2ab$

B.  $0$

C.  $ab$

D.  $a\frac{b}{2}$

**Answer:**



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95.  $a^2 + b^2 = \underline{\hspace{2cm}}$

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

B.  $a^2 - b^2$

C.  $(a - b)^2$

D. None

**Answer:**



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96.  $(a - b)^2 + 4ab = \underline{\hspace{2cm}}$

A.  $(a - b)^3$

B.  $(a - b)^2$

C.  $(a + b)^2$

D.  $a^2 - b$

**Answer:**



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97.  $(a - b)^2 - (a + b)^2 = \underline{\hspace{2cm}}$

A.  $2a^2 + b^2$

B. 0

C.  $4ab$

D.  $-4ab$

**Answer:**



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98. Degree of  $3x^2y^2z^3$  is \_\_\_

A. 2

B. 3

C. 7

D. 3

**Answer:**



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99. The value of  $2x^3 - 2x^2 + 1$  at  $x = 1$  is \_\_

A. 4

B. -1

C. 3

D. 1

**Answer:**



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100.  $a(a^2 - b^2) = \underline{\hspace{2cm}}$

A.  $a^3 - b^2a$

B.  $a - b^2$

C.  $a^3 - b^2$

D.  $a - b^3$

**Answer:**



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101.  $a(a - b) + b(b - c) + c(c - a) = \underline{\quad}$

A. 0

B.  $a^2 - b^2$

C.  $a^2 + b^2$

D.  $a^2 + b^2 + c^2 - ab - bc - ca$

**Answer:**



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**102.** Evaluate the following by using suitable identities:  $83 \times 77$

A. 3691

B. 6391

C. 6091

D. 1391

**Answer:**



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**103.** Evaluate the following by using suitable identities:  $304^2$

A. 82416

B. 92416

C. 82466

D. 93416

**Answer:**



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

A.  $m - n^2$

B.  $m^2 - n$

C.  $m - n$

D. None

**Answer:**



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105.  $9k^2 + 24kl + 16l^2 = \underline{\hspace{2cm}}$

A.  $(9k + 3l)^2$

B.  $(3k + 4l)(3k + 4l)$

C.  $(3k - 4l)^2$

D. None

**Answer:**



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106.  $abc \times a^2bc = \underline{\hspace{2cm}}$

A.  $a^2b^2c^2$

B.  $abc^2$

C.  $a^3b^2c^2$

D.  $ab^2c$

**Answer:**



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107.  $(p + q)(p^2 - pq + q^2) = \underline{\hspace{2cm}}$

A.  $p^3 + q$

B.  $p - q^2$

C.  $p^2 + q^2$

D.  $p^3 + q^3$

**Answer:**



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108.  $m^3 + m^2n - n^2m - n^3 = \underline{\hspace{2cm}}$

A.  $(m^2 - n^2)(m + n)$

B.  $(m - n)(m^2 + n^2)$

C.  $(m + n)(m - 1)$

D. None

**Answer:**



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109.  $(-5p^2) \times (-2p) = \underline{\hspace{2cm}}$

A.  $10p^3$

B.  $10p$

C.  $-10p^3$

D.  $-8p^3$

**Answer:**



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110.  $92^2 - 8^2 = \underline{\hspace{2cm}}$

A. 1400

B. 1000

C. 8400

D. 8500

**Answer:**



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111.  $I = \underline{\hspace{2cm}}$

A.  $PT \frac{R}{100}$

B.  $P / 100TR$

C.  $100T / PR$

D.  $100 \frac{I}{P} R$

**Answer:**



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112.  $106 \times 94 = \underline{\quad}$

A. 9864

B. 9964

C. 9800

D. 9364

**Answer:**



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113.  $-3x^2 + 3x^2 - 5x^2 - x^2 = \underline{\quad}$

A.  $x^2$

B.  $-6x^2$

C.  $3x^2$

D.  $6x^2$

**Answer:**



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114. Identity like terms.

A.  $3x^2, 2x^2, -x^2$

B.  $xy, xy^2, -3y^2$

C.  $pq, pq^2, \left(\frac{3}{4}\right) pq$

D.  $8x^2, 9y^2, 2pq$

**Answer:**



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115.  $(a + b)^2 - (a - b)^2 =$

A.  $2ab$

B.  $2bc$

C.  $4a^2$

D. none

**Answer:**



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116. The value of  $3x + 5$  at  $x = 1$  is \_\_\_\_\_

A. 6

B. 8

C. 9

D. 10

**Answer:**



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117.  $a = 1, b = 2 (a - b)^2 = \underline{\hspace{2cm}}$

A. -1

B. 1

C. -2

D. 3

**Answer:**



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118. At  $x = \frac{1}{2}$  the value of  $2x - 1$  is \_\_\_

A. 1

B. 0

C. -1

D. 2

**Answer:**



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119.  $P = xy$ ,  $Q = yz$ ,  $R = zx$  then  $PQR = \underline{\hspace{2cm}}$

A.  $x^2y^2z^2$

B.  $xy^2z^2$

C.  $xyz$

D.  $x^2y^2/z^2$

**Answer:**



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120.  $(5x^2 - 6x + 9)(2x - 3) = \underline{\hspace{2cm}}$

A.  $10x^3 - 7x^2 + 3x$

B.  $10x^3 - 7x^2 + x + 1$

C.  $10x^3 - 27x^2 + 7$

D.  $10x^3 - 27x^2 + 36x - 27$

**Answer:**



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121.  $(3x + 5y)(5x - 7y) = \underline{\hspace{2cm}}$

A.  $15x^2 - 3y^2$

B.  $15x^2 + 4xy - 35y^2$

C.  $15x^2 - 4xy$

D.  $15x - 13xy^2$

**Answer:**



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122. Additive inverse of  $6x^2 - 4x - 1$  is \_\_\_

A.  $x^2 - 6x + 1$

B.  $-6x^2 + 4x - 3$

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

D.  $(-6x^2) + 4x + 1$

**Answer:**



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123.

Simplify:

$$2x^2 + 5x - 1 + 8x + x^2 + 7 - 6x + 3 - 3x^2$$

A.  $7x + 9$

B.  $x - 7$

C.  $x - 9$

D.  $x + 3$

**Answer:**



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124.  $2a + b - (a - b) = \underline{\quad}$

A.  $a - b$

B.  $2a - 2b$

C.  $a + 2b$

D.  $a - 2b$

**Answer:**



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125. Degree of 0 is.....

A. 0

B. -1

C. 3

D. not defined

**Answer:**



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**126.** The degree of any constant term is.....

A. 0

B. 1

C. 2

D. (-1)

**Answer:**



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**127.**  $(3x^2 - 7x + 1)(4x - 4x) = \underline{\hspace{2cm}}$

A.  $4x^3 - x^2 + 11$

B. 0

C.  $3x^3 - 7x + 1$

D. none

**Answer:**



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**128.**  $(x - 1)(x + 1) = \underline{\hspace{2cm}}$

A.  $x^2 + 1$

B.  $x^2 - 1$

C.  $x - 1$



D.  $x + 3$

**Answer:**



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**129.** Number of terms in trinomial is....

A. 0

B. 1

C. 2

D. 3

**Answer:**



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**130.**  $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b}) = \_\_\_$

A.  $a-b^2$

B.  $a-b$

C.  $a^2-b$

D.  $a + b$

**Answer:**



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131.  $\left(\frac{a}{3} + \frac{b}{5}\right)\left(\frac{a}{3} - \frac{b}{5}\right) = \text{---}$

A. a)  $\frac{a^2}{a} + \frac{b}{2}$

B. b)  $\frac{a^2}{a} + 1$

C. c)  $\frac{a^2}{9} - \frac{b^2}{25}$

D. d)  $2\frac{a}{3} - \frac{b}{3}$

**Answer:**



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132. Number of terms in  $ax^2+bx+c$  is= \_\_

A. 2

B. 3

C. 4

D. 1

**Answer:**



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133.  $(a-b)(a^2 + ab + b^2) = \underline{\hspace{2cm}}$

A.  $a^3 - b$

B.  $a-b^3$

C.  $a^2-b^2$

D. None

**Answer:**



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134.  $(x+3)(x + 2) =$

A.  $x^2 + 5x + 6$

B.  $x^2 - 5x - 6$

C.  $x^2 - 3x + 6$

D. None

**Answer:**



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135.  $9x^2 - y^2 =$

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

B.  $(3x-1)(3x-y)$

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

D. None,

**Answer:**



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136.  $(4a^2 - 1)/(2a + 1) = \underline{\quad}$

A.  $a-1$

B.  $a = 1$

C.  $2a$

D.  $2a-1$

**Answer:**



**Watch Video Solution**



137.  $(3x^2 - 7x + 9) \div 0 = \underline{\hspace{2cm}}$

A. 0

B.  $3x^2 - 9$

C.  $9x$

D. Not defined

**Answer:**



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138.

$$m^2(m - 2) + 2m^2(m + 3) - 6m(m - 4) = \underline{\hspace{2cm}}$$

A.  $m - 24m^4$

B.  $m^4 + 24m$

C.  $m^4 + 2m$ .

D.  $m + 4m^2$

**Answer:**



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139. Cube of  $(a + 1)$  is= \_\_

A.  $a^3 + 3a^2 + 3a + 1$

B.  $a + 2a + 1$

C.  $a + 3a + 3$

D.  $3a - 3$

**Answer:**



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140.  $(99)^2 = \underline{\quad}$

A. 1145

B. 8900

C. 9800

D. 9801

**Answer:**



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$$141.9.8 \times 10.2 = \underline{\quad}$$

A. 39,55

B. 91.99

C. 99.96

D. 96.99

**Answer:**



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**142.**  $(84)^2 - (16)^2 = \underline{\quad}$

A. 3600

B. 6100

C. 6800

D. 6900

**Answer:**



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**143.**  $1010 \times 990 = \underline{\quad}$

A. 999900

B. 99099

C. 99000

D. 98900

**Answer:**



**Watch Video Solution**

**144.**  $(705)^2 - (295)^2$

A. 23000

B. 13000

C. 140000

D. 410000

**Answer:**



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**145.**  $(x+1)(x-1) (x^2 + 1)$ .

A.  $x^4 - 1$

B.  $x^2 - 1$

C.  $4x - 1$

D.  $x + 1$

**Answer:**





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146.  $8x = (52)^2 - (48)^2$  then  $x =$  \_\_\_\_

A. 12

B. 50

C. 9

D. 26

**Answer:**



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147.  $13x = (85)^2 - (84)^2$  then  $x = \underline{\hspace{2cm}}$

A. 16

B. 11

C. 13

D. 10

**Answer:**



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148.  $(11+x)(11-x)=$  \_\_\_

A.  $121-x^2$

B.  $121-x$

C.  $12-x^2$

D.  $3x-4$

**Answer:**



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**149.**  $113^3 =$

A. 1221

B. 1331

C. 1441

D. 1113

**Answer:**



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150.  $\left(X + \frac{1}{x}\right)^2 =$

A.  $x + \frac{1}{2}x$

B.  $x + \frac{1}{x^2}$

C.  $3x - \frac{1}{x^2}$

D.  $x^2 + 2 + \frac{1}{x^2}$

**Answer:**



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151.  $(7xy-1)(7xy + 1) = \underline{\quad}$

A.  $49x^2 y^2 - 1$

B.  $49xy^2 - 1$

C.  $49xy^2 - 1$

D.  $9xy - 1$

**Answer:**



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152. The product of two positive numbers is

A. 0

B. -1

C. Negative

D. Positive

**Answer:**



**Watch Video Solution**

153. Find  $3x^2y \times 4xy^2 \times 7x^3y^3$

A.  $84x^6y^6$

B.  $48y^6$

C.  $41xy^6$

D.  $40x^6y^6$

**Answer:**



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**154.** The sum of all exponents of variables in a monomial is called \_\_\_ of the monomial.

A. Expression

B. Degree

C. Like

D. None

**Answer:**



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155. Degree of the trinomial  $3xy + 4y - 8$  is

A. 2

B. 4

C. 3

D. -8

**Answer:**



**Watch Video Solution**

156.  $5x \times 6y \times 7z = \underline{\quad}$

A.  $2xy$

B.  $105xy$

C.  $120x$

D.  $210xyz$

**Answer:**



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**157.** In a cuboid  $l=2x$ ,  $b=3y$ ,  $h=4z$  then volume,  $V$

= \_\_\_\_

A.  $3xyz$

B.  $2xy$

C.  $4xyz$

D.  $24xyz,$

**Answer:**



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**158.**  $a(b + c) = ab + ac$  is called \_\_\_ property.

A. Identity

B. Distributive

C. Commutative

D. None.

**Answer:**



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**159.** No. of terms in the product of a binomial and trinomial are \_\_\_\_

A. 4

B. 10

C. 9

D. None

**Answer:**



**Watch Video Solution**

**160.**  $a(a + 1) = 6$  then  $a = \underline{\quad}$

A. 2

B. -3

C. -3&2

D. None

**Answer:**



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**161.** Taking  $a, b, c$  as positive integers, verify the following whether they are identities or not?

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca.$$

A.  $(a + b + c)^2$

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

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

D.  $(a - b)^2$

**Answer:**



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**162.**  $196^2 - (194 + 2)^2 = \underline{\hspace{2cm}}$

A. 16

B. 19



C. 19

D. 0

**Answer:**



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**163.**  $9672 = \underline{\quad}$

A.  $93 \times 004$

B.  $93 \times 102$

C.  $93 \times 102$

D.  $93 \times 107$

**Answer:**



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**164.**  $a(a - b) + b(a - b) = \underline{\quad}$

A.  $a^2 - b$

B.  $a^2 - b^2$

C.  $a - b^2$

D.  $\frac{a}{2} - b$

**Answer:**



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**165.**  $a^2 - b^2 = (a + b)(a - b)$  is a

A. Identity

B. Area

C. Place

D. None

**Answer:**



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166.  $(x+a)(x-b) = \underline{\hspace{2em}}$

A.  $x^2 + ax - bx - ab$

B.  $x^2(a+b) - x - ab$

C.  $x^2 - ax - ab$

D. None

**Answer:**



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**167.**  $101^2 - 101^2 =$

A. 101

B. 202

C. 0

D. 401

**Answer:**



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**168.**  $a = 13$ ,  $b = 12$  then  $a^2 - b^2 =$

A. 16

B. 10

C. 25

D. 12

**Answer:**



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