Assignment

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1) What is the value of $(x^2 + 9y^2 + 6xy) + (x^2 - 8y^2 - 7xy)$?
2) Add $5x^3 - 2y^3$ and $7x^3 - 3y^3$
3) Add the following expressions and write your answers.
   (i) $(3p + 2q - rq) + (p - 3q + 2q)$
   (ii) $(2 - 3a + 4b) + (5a + b - 2)$
4) Add $5a + 7b – 6c$, $b + 2c – 3a$ and $2a – 5b – 3c$
5) Add $7x^2 + 8y – 9$, $3y + 2 – 3x^2$ and $3 – y + 3x^2$.
6) Add $4x^2 – 2xy + 4y^2$, $3xy – 5y^2 + 9x^2$ and $2y^2 + xy – 7x^2$.
7) Add $10a^2 + 3b^2 – c^2$, $2b^2 + 6c^2 – 7a^2$ and $3a^2 – 8b^2 – 6c^2$.
8) Add $3x + 9y + 5$ and $4x + 3y + 2$
9) Add $12x + 4y + 21z$ and $32x – 2y – 16z$
10) Add $6x^3 – 4y^3$ and $9x^3 – 5y^3$
11) Add $3a^2 + 5b^2 + 7c^2 – 9abc$ and $2a^2 – 4b^2 + 6c^2 + 8abc$
12) Add $2xy^2 + 6x^2y – 9x^2y – 4xy^2 + 5$ and $3x^2y + 2xy^2$
13) Add $2x^2 + 3y – 4z^2$, $5y + 3x^2$, $4x^2 + 9z^2 – 8y$ and $3y – 3x^2$.
14) Add $5xy – 3x^2 – 12y + 5x$, $xy – 3x – 12yz + 5x^3$ and $y – 6x^2 – zy + 5x^3$.
15) Add $x^2y – 2x^2 – zy + 5$ and $–3x^2 + 3x^3$ from $y^3 + 3x^2y – 6x^2 – 6zy + 7x^3$
16) Add $8a^3b^3 + 4ab^3 – 2a^2b^3$ and $8a^2 – a^2b^3 + 4ab^3$
17) Add $44x^4 + 17x^3 + x – 18$ and $54x^4 – 33x^3 – 28x^2 + 7x – 6$.
18) Add $(29x^3 – 11x + 30) – (17x^3 – 8x – 22) + (37x^2 + 4)$
19) Add $(10x^2 + 14) + (9x^2 + 3) – (8x^2 – 6)$
20) What is the answer we get by adding x^2-y^2 and y^2 - x^2
21) What is the value of $p + (p – q) + q + (q – p)$?
22) Add the following algebraic expressions: 12x+10y-5xy+23 and 17+5x-10y 8xy-8xy
23) Add $(6xy–4x^2–y^2+5)+(x^2–3xy+7y^2–2)$
24) What should be subtracted from $a^3–4a^2+5a–6$ to obtain $a^2–2a+1$?

25) Simplify the following expressions:

a) $3.5x - 2 + 5.2x - 3$

b) $\frac{1}{3}x - 4 + \frac{1}{6}x + \frac{1}{8} - x$

26) Identify the terms with x^3 and find the coefficient of x^3 in the following expressions:

a) $x^3y^2 + 3$

b) $x^2 + x$

c) $3x^2y^2 - 2 + 5x^3y$

27) Write the algebraic expression for the following statements:

a) Multiply x by 4 and add 5 to the product

b) Multiply y by 3 and subtract 2 from the product

c) Multiply the variable x by 3

d) Product of numbers 2 and y subtracted from 5

e) Subtraction of 5 from twice a number x

f) Number 3 added to 4 times the product of numbers m and n

28) Add $3.2y - (-10x) + 3.2x + (-2y)$

29) Add $6x + (- y) + 3x - (- 4y)$

30) Find the sum.

a) $(3.2 - x) + (-10x + 2.5)$

b) $(\frac{1}{3}m - 3) + (\frac{1}{6}m + 7)$

31) Find the difference.

a) $(-3g + 8) - (5g + 12)$

b) $-\frac{7}{2}(3y - 6) + 2(5 - \frac{9}{2}x + 12)$

32) Subtract $5 - 4x + x^2$ from the sum of $2x^2$ $5x$ and $7x^2 - 2$.

33) Find the product: $5a^2b^2 \times (3a^2 - 4ab + 6b^2)$

34) Multiply: $2x$ by $3x+5y$

35) Multiply: $(3x+2y)$ and $(5x+3y)$.

36) Find the value of the given product: $(x+2y)(x-2y)$

37) Multiply: $5x \times 21y \times 32z$

38) Multiply: $(2a2 + 9a + 10)$ by $4a$.

39) Multiply: $4ab\ (5ab)$

40) Multiply: $(x + 5)(a - 6) = ?$

41) Multiply: $(x + 2)(x + 3)$

42) Multiply: $(5x + 9)(4x - 2)$

43) Multiply: $(2x + y)(3x + 2y)$

44) Multiply: $(2x + 2)^2$

45) Multiply: $3cy^2(-4cx - 2xy^3)(x + 5)(x - 2)$

46) Multiply: $-3a^3\ b \times 4b^2\ a$

47) Multiply: $(6b^2\ )(5a-6b)$

48) Multiply: $8rm^3 \times 6m^3\ r^5$

49) Multiply: $p^5\ q^6 \times q^5\ p^5$

50) Multiply: $(-4a)\ x\ 6ab \times 5b$

51) Multiply: $(3g + 5)\ (4m - 3) + (7mg)$

52) Multiply: $(3x + 7y + 6 + 9x^2 + 4y^2\ )\ (8x + 9y)$

53) Multiply: $(6y + 3)\ (7x - 5) + (9x + 5)\ (7y - 9)$

54) Multiply: $(3g)\ (4m2 + 5 + 6m) - (4m)\ (6g - 3 + 4g2)$

55) Evaluate: $5a + 21bc \div 3c \times 2^3b - 61a$

56) Evaluate: $4a^3 \times 6a^4 \div 2ab - 8b^2 \times 15$

57) Evaluate: $4^3a^3 \div 8a \times 2a^3 - 7^2b + b$

58) Evaluate: $(-10a^2 - 8a^2 \times 8b)(\ -22b \times 45a^2 \div 5ba \times 3^2)$

59) Evaluate: $(96ab \div 4^2b - 9b^2 + 1\ )(\ 48a \div 24ab - 5a)$

60) Evaluate: $(8 - 2^2x + 4x)\ (64x^3 \div 4x^2)$

61) Evaluate: $15a \times 3ba^2 - 1 + 9^2a^2 \div 27ab$

62) Evaluate: $6^2 \times 4b - 18a^3 \div 6a$