Math 9 · Polynomials

Simplify

[#1] $2x + 3x$

[#2] $2x \cdot 3x$

[#3] $2x + 3y$

[#4] $2x \cdot 3y$

Collect Like terms

[#5] $5x + 11x + 3x$

[#6] $2x - 5x$

[#7] $3x^2 + x^2$

[#8] $3a - 2b + 7a - 5b$

[#9] $5x + 2y - 7x - 11y + z - 3x + 5y$

[#10] $2x - 3x^2 + 7x + x^3 - 5x + 8 - 9x^2$

[#11] $3x^2y^2 - 2xy^2 + 5x^2y - 3yx^2 + x^2y^2$

Multiply

[#12] $(4x^2)(-5x^3)$

[#13] $(3ab^2)(2a^3b)$

[#14] $(-4x^3)(-y^2)$

Expand

[#15] $3(2x - 5)$

[#16] $-4(x^2 + 7x - 3)$

[#17] $-(a - 3b + c)$

[#18] $3x(2x + 7y)$

[#19] $-5x^2(3x - 2)$

Expand and Simplify

[#20] $2(5x + 3y) + 3(2x - y)$

[#21] $5x(x - 2) - 3(3x^2 - x + 7)$

[#22] $2x(3x - 5) - (x^2 + 3x - 2)$

Divide

[#23] $\frac{10x^3 + 5x^2 - 15}{5}$

[#24] $\frac{9a + 3b - 3}{-3}$

[#25] $\frac{10x^2y^2 - 15xy^3}{5xy^2}$

Determine the degree of each monomial

[#26] $3x^5$

[#27] $-2xy^3$

[#28] 6

Determine the degree of each polynomial

[#29] $x^3 - 2x^2 + 5x - 1$

[#30] $x + x^2y + x^3yz$

Key [#1] $5x$ [#2] $6x^2$ [#3] $2x + 3y$ [#4] $6xy$ [#5] $19x$ [#6] $-3x$ [#7] $4x^2$ [#8] $10a - 7b$ [#9] $-5x - 4y + z$ [#10] $x^3 - 12x^2 + 4x + 8$ [#11] $4x^2y^2 + 2x^2y - 2xy^2$ [#12] $-20x^5$ [#13] $6a^4b^3$ [#14] $4x^3y^2$ [#15] $6x - 15$ [#16] $-4x^2 - 28x + 12$ [#17] $-a + 3b - c$ [#18] $6x^2 = 21xy$ [#19] $-15x^3 + 10x^2$ [#20] $16x + 3y$ [#21] $-4x^2 - 7x - 21$ [#22] $5x^2 - 13x + 2$ [#23] $2x^3 + x^2 - 3$ [#24] $-3a - b + 1$ [#25] $2x - 3y$ [#26] 5 [#27] 4 [#28] 0 [#29] 3 [#30] 5