Oct. 16

Adding Polynomials

$3x + 6x = 9x$

$3x + 6x + 8y = 9x + 8y$

$3xy + 6xy + 8y = 9xy + 8y$

Distributive Property

$2(x+3) = 2x+6$

$3x(3x+6y-2) = 9x^2 + 18yx - 6x$

Multiplying Monomials

$(3x)(2y) = 6xy$

$(-2a)(-4b) = 8ab$

$(-8ab)(4a) = -32a^2b$

Powers of Monomials

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① $(x)^2 = x^2$

② $(a)^3 = a^3$

③ $(p)^5 = p^5$

④ $(n^2)^2 = n^2 \cdot n^2$

$= n \cdot n \cdot n \cdot n$

$= n^4$

⑤ $(-4^3)^2 = (-4^3) \cdot (-4^3)$

$= -4 \cdot -4 \cdot -4 \cdot -4 \cdot -4 \cdot -4$

$= (-4)^6$

⑥ $(-y^2)^3$

$= (-y^2)\cdot(-y^2)\cdot(-y^2)$

$= -y\cdot-y\cdot-y\cdot-y\cdot-y\cdot-y$

$= (-y)^6$

⑦ $(x^2)^3 = x^6$

⑧ $(y^3)^2 = y^6$

⑨ $(m^2)^2 = m^4$

(16) $(-5^{10})^2 = (-5)^{20}$

(18) $-(-b^6)^3 = -(-b^6)$

(19) $(xy)^2 = (x \cdot y) \cdot (x \cdot y)$

$= x^2 y^2$

(21) $(-xy)^2 = x^2 y^2$

(24) $(-2xt)^2 = -2^2 x^2 t^2$

$= 4x^2 t^2$

(28) $(x^2 y^2)^3$

$= (x^2)^3 \cdot (y^2)^3$

$= x^6 y^6$

(31) $(ab^3)^2 = a^2b^6$

(34) $(-c^3d^4)^2 = -c^6d^8$

(37) $(2x^2)^3 = 2^3x^6 = 8x^6$

Anything w. 0 exponent equals 1

(39) $(4x^4)^2 = 4^2x^8 = 16x^8$

(43) $(-2n^2)^3 = -8n^6$

(48) $-(3xy^0)^2 = -(9x^2y^0)$

$= -9x^2$

(51) $(2x^2y^3)^2(x^2y)$

$= (4x^4y^6)(1x^2y)$

$= 4x^6y^7$

(55) $(10abc)^2(-2a^2bc)$

$= (100a^2b^2c^2)(-2a^2bc)$

$= -200a^4b^3c^3$

Homework
Section 6.7
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