

Key

OBJECTIVE 1-i: To add, subtract, multiply, or find powers of monomials (review).

# What Happened to the Man Who Invested in a Paper Towel Company and a Revolving Door Factory?

Simplify each expression. Find the answer below and notice the two letters next to it. Write these letters in the two boxes above the exercise number at the bottom of the page.

$$1 \quad 7x^2 + 3x - x^2 \quad \boxed{6x^2 + 3x}$$

$$2 \quad (7x^2)(3x)(-x^2) \quad \boxed{-21x^5}$$

$$3 \quad (-2x^3)(5x)(-8x^4) \quad \boxed{80x^{13}}$$

$$4 \quad x(3x^2)^3 = x(27x^6) = \boxed{27x^7}$$

$$5 \quad -4x(-5x)^2 = -4x(25x^2) = \boxed{-100x^3}$$

$$6 \quad (2x^4)(-6x^3) + (9x)(3x^6)$$

$$= -12x^7 + 27x^7$$

$$= \boxed{15x^7}$$

Answers:

$$\text{IN } 80x^{11} \quad \text{OR } -100x^3$$

$$\text{SW } 27x^7 \quad \text{ED } 6x^2 + 3x$$

$$\text{EC } -21x^5 \quad \text{LA } 36x^7$$

$$\text{HE } 15x^7 \quad \text{OU } 80x^8$$

$$7 \quad a^2 + b + a^2 + b^2 + b = 2a^2 + b^2 + 2b$$

$$8 \quad (-2a^3b)^4 = 16a^{12}b^4$$

$$9 \quad a^2(6a^3b)(ab^5) = 6a^6b^6$$

$$10 \quad (4ab^3)(-5b^6)(2a^2) = -40a^3b^9$$

$$11 \quad (3a^4b)(5ab^2) - (a^5b^2)(9b) = 15a^5b^3 - 9a^5b^3 = \boxed{6a^5b^3}$$

$$12 \quad (7a^2b^2)^2 + (ab)^4 - 50$$

$$= 49a^4b^4 + a^4b^4 - 50$$

$$= \boxed{50a^4b^4 - 50}$$

Answers:

$$\text{OU } 6a^6b^6 \quad \text{LD } 2a^2 + b^2 + 2b$$

$$\text{ER } 6a^7b^4 \quad \text{RN } -40a^3b^9$$

$$\text{TB } 16a^{12}b^4 \quad \text{ND } 50a^4b^4 - 50$$

$$\text{EH } 6a^5b^3 \quad \text{TO } -40a^4b^6$$

$$13 \quad (8x^2y)(x^4y^3)^2 = (8x^2y)(x^8y^6) = \boxed{8x^{10}y^7}$$

$$14 \quad 2x(-5y^6)^3 = 2x(-125y^{18}) = \boxed{-250xy^{18}}$$

$$15 \quad (xy^2)^3(x^2y)^2 + (x^3y^4)(x^2y^2)^2$$

$$16 \quad (-x^2)^5(-2x^2y^3)^3 = x^7y^8 + x^7y^8 = \boxed{2x^7y^8}$$

$$17 \quad (4xy^7)(2x^4y) - (5x^3y^3)(-8x^2y^5) = 8x^5y^8 - 40x^5y^8 = \boxed{48x^5y^8}$$

$$18 \quad (3x^2)(3y^2) + 3x^2y - (3xy)^2 - 3xy^2$$

$$= 9x^2y^2 + 3x^2y - 9x^2y^2 - 3xy^2$$

$$= \boxed{3x^2y - 3xy^2}$$

Answers:

$$\text{SO } 18x^6y^9 \quad \text{TU } 48x^5y^8$$

$$\text{WA } 8x^{10}y^7 \quad \text{EF } -250xy^{18}$$

$$\text{HA } 8x^{12}y^8 \quad \text{IP } 3x^2y - 3xy^2$$

$$\text{AR } 2x^7y^8 \quad \text{OU } 8x^{16}y^9$$

H	E	W	A	S	W	I	P	E	D	O	U	T	B	E	F	O	R	E	H	E	C	O	L	D	T	U	R	N	A	R	O	U	N	D
6	13	4	18	1	16	8	14	5	11	2	9	7	17	10	15	3	12																	