

October 31, 2017

Exp #2
#5)

$$\frac{2x^2y^4 \cdot 4x^2y^4 \cdot 3x}{3x^{-3}y^2}$$

$$\frac{24x^5y^8}{13x^{-3}y^2}$$

$$\frac{8x^{5-(-3)=8}y^{8-2=6}}{1}$$

$$\boxed{8x^8y^6}$$

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$$\frac{x^5}{x^{-3}}$$

① Quotient Rule
 $x^{5-(-3)} = 5+3=8 = \boxed{x^8}$

② Negative Exp Rule/Product Rule
 $x^5 \cdot x^3 = x^{5+3=8} = \boxed{x^8}$

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Exp #2
#10)

$$\frac{2m^{-4}}{(2m^{-4})^3} = \frac{2}{m^4 \cdot 2^3 \cdot m^{-12}}$$

$$= \frac{2m^{12}}{48m^4}$$

$$= \frac{m^{12-4=8}}{4}$$

$$= \boxed{\frac{m^8}{4}}$$

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Exp #2
#16)

$$(2x^0y^2)^{-3} \cdot 2yx^3$$

Recall
① $a^{-n} = \frac{1}{a^n}$

$$\frac{2^3 \cdot 1 \cdot y^{-6} \cdot 2yx^3}{2^3 y^5}$$

$$= \frac{x^3}{4y^5}$$

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Exp #1
#8)

$$\boxed{4v^3 \cdot vu^2}$$

$$\boxed{4v^4u^2}$$

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Exp #1
#10)

$$x^2y^{-4} \cdot x^3y^2$$

$$x^5y^{-2}$$

$$\boxed{\frac{x^5}{y^2}}$$

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Exp # 1
#1 > $(4n^0)^4 = (4 \cdot 1)^4$
 $= (4)^4$
 $= 64$

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5.6 Polynomial Multiplication

① $2xy \cdot 3x$
 $6x^2y$

② $-x(4x - 2y + 8)$
 $-4x^2 + 2xy - 8x$
**no like terms*

③ $(x+3)(x^2 - 5x + 4)$
 $x^3 - 5x^2 + 4x + 3x^2 - 15x + 12$
 $x^3 - 2x^2 - 11x + 12$

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④ $(x-5)(x+6)$
 $x^2 + 6x - 5x - 30$
like
 $x^2 + x - 30$

Factoring "Chop"
multiplication "5x"

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⑤ $(3x-2)^2 \neq 9x^2 - 4$
base
 $(3x-2)(3x-2)$
 $9x^2 - 6x - 6x + 4$
 $9x^2 - 12x + 4$

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$(7x-3)^3$
 $[(7x-3)(7x-3)](7x-3)$
 $49x^2 - 21x - 21x + 9$
like
 $(49x^2 - 42x + 9)(7x-3)$
 $343x^3 - 147x^2 - 294x^2 + 126x$
 $+ 63x - 27$
 $343x^3 - 441x^2 + 182x - 27$

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$(-5x-2)^5$

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