August 22, 2018

* Quiz #1 – Friday on Reading from Webpage.

Meaning of an Exponent

$a^n = a \cdot a \cdot a \cdot \ldots a$ (n factors of the base)

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Laws

① $x^2 \cdot x^3 = x \cdot x \cdot x \cdot x \cdot x = x^5$ (some base)

$x^{2+3=5} = x^5$

② $(x^3)^2 = x^3 \cdot x^3$ (Base)

$= x \cdot x \cdot x \cdot x \cdot x \cdot x$

$= x^6$

$(x^3)^{2=6} = x^6$

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③ (same base) $\frac{x^3}{x^2} = \frac{x \cdot x \cdot x}{x \cdot x \cdot 1} = \frac{x}{1} = x^1$ ("1" "1")

$x^{3-2=1} = x^1 = x$

3.2 $\frac{x^2}{x^3} = \frac{x \cdot x \cdot 1}{x \cdot x \cdot x} = \frac{1}{x}$ (Fraction)

$x^{2-3=-1} = x^{-1}$

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Factoring

21 (Composite)

$= 3 \cdot 7$

$= 7 \cdot 3$

$= 1 \cdot 21$

$= 21 \cdot 1$

Factors of 21

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$48 = 2^4 \cdot 3$

$48 = 2 \cdot 24$

$24 = 2 \cdot 12$

$12 = 2 \cdot 6$

$6 = 2 \cdot 3$

$90 = 2 \cdot 3^2 \cdot 5$

$90 = 2 \cdot 45$

$45 = 3 \cdot 15$

$15 = 3 \cdot 5$

Greatest Common Factor (GCF)

$48 = 2^4 \cdot 3$

$90 = 2 \cdot 3^2 \cdot 5$

$2 \cdot 3 = 6$ GCF

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#7) $28ab^2, 14a^2b^3, 42a^2b^5$

GCF $= 14ab^2$

$28ab^2 - 14a^2b^3 + 42a^2b^5$

$7ab^2(4 - 2ab$

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