Exponents

9/14

* Represent Repeated Multiplication *

ex) $10^3 = 10 \cdot 10 \cdot 10$

Vocabulary

10^3 ← exponent

power

base

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How to read powers:

- 10 to the fifth power = 10^5
  $10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$
- 10 Squared = 10^2
  ↳ 10 to the 2nd power

10×10
10^2

- 10 cubed = 10^3
  ↳ 10 to the 3rd power

$10 \cdot 10 \cdot 10$
10^3

- 10 to the 7th power = 10^7 10^7

10 x 10 x 10 x 10 x 10 x 10 x 10

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Rewrite using exponents:

① $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 = 3^5$

② $b \cdot b \cdot b \cdot b = b^4$

③ $[b \cdot b \cdot b] + [3 \cdot 3 \cdot 3] = b^3 + 3^3$

3a) $b \cdot b \cdot b \cdot 3 \cdot 3 \cdot 3 = b^3 \cdot 3^3$

3b) $b+b+b+3+3+3$ - No exponents w/ addition

④ $5 \cdot 5 \cdot 7 \cdot 7 \cdot b \cdot b = 5^2 \cdot 7^2 \cdot b^2$ (3b)

⑤ $3 \cdot 3 \cdot 3 \cdot 3 \cdot 3 \cdot f \cdot f \cdot g = 3^5 \cdot f^2 \cdot g$

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Evaluate:

① $4^2 = 16$

② $4^5 = 1024$

③ $0.4^3 = 0.064$

④ $\left(\frac{2}{3}\right)^5 = \frac{32}{243}$

Calc

① Base

② y^x (below off)

③ Exponent

④ =

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