m, n 이 자연수일 때, $\left(\dfrac{a}{b}\right)^m = \dfrac{a^m}{b^m}$

($\left(\dfrac{a}{b}\right)^m = \dfrac{a^m}{b^m}$ (m, n are natural numbers.))

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \ (\ m,\ n \text{ are natural numbers.})$$

▸ Start

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \quad (m, n \text{ are natural numbers.})$$

$$\left(\frac{a}{b}\right)^m$$

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \quad (m, n \text{ are natural numbers.})$$

▸ Start

$$\left(\frac{a}{b}\right)^m = \underbrace{\frac{a}{b} \times \cdots \times \frac{a}{b}}_{m}$$

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \ (\textit{m, n} \text{ are natural numbers.})$$

▸ Start

$$\left(\frac{a}{b}\right)^m = \underbrace{\frac{a}{b} \times \cdots \times \frac{a}{b}}_{m}$$

$$= \frac{\overbrace{a \times \cdots \times a}^{m}}{\underbrace{b \times \cdots \times b}_{m}}$$

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \quad (m, n \text{ are natural numbers.})$$

▸ Start

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$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \quad (\,m,\, n \text{ are natural numbers.})$$

$$\left(\frac{a}{b}\right)^m = \underbrace{\frac{a}{b} \times \cdots \times \frac{a}{b}}_{m}$$

$$= \frac{\overbrace{a \times \cdots \times a}^{m}}{\underbrace{b \times \cdots \times b}_{m}} = \frac{a^m}{b^m}$$

$$\therefore$$

$$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m} \quad (m, n \text{ are natural numbers.})$$

▶ Start

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$$\therefore \left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$$

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$$\left(\frac{a}{b}\right)^m = \underbrace{\frac{a}{b} \times \cdots \times \frac{a}{b}}_{m}$$

$$= \frac{\overbrace{a \times \cdots \times a}^{m}}{\underbrace{b \times \cdots \times b}_{m}} = \frac{a^m}{b^m}$$

$$\therefore \left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$$

END