$$m, n$$
이 자연수일 때,  $a^m \div a^n$   $(a^m \div a^n (m, n \text{ are natural numbers.}))$ 



 $a^{m}$ 



$$a^m \div$$



$$a^m \div a^n$$

$$a^m \div a^n =$$

$$a^m \div a^n = \frac{a^m}{a^n}$$

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

$$a^{m} \div a^{n} = \frac{a^{m}}{a^{n}} = \underbrace{\underbrace{a \times \cdots \times a}_{n}}^{m}$$

$$= \begin{cases} \\ \\ \\ \end{cases}$$

$$a^{m} \div a^{n} = \frac{a^{m}}{a^{n}} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}, m > n \end{cases}$$

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

$$= \begin{cases} \underbrace{\overbrace{a \times \cdots \times a}^{m-n}}_{n} & , m > n \\ \frac{1}{1} & , m = n \end{cases}$$

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

$$= \begin{cases} \underbrace{\overbrace{a \times \cdots \times a}^{m-n}}_{n}, m > n \\ \underbrace{\frac{1}{1}}_{n}, m = n \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases}$$

$$a^{m} \div a^{n} = \frac{a^{m}}{a^{n}} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}, m > n \\ \frac{1}{1}, m = n = \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases}$$

► Start

$$a^{m} \div a^{n} = \frac{a^{m}}{a^{n}} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}, m > n \\ \frac{1}{1}, m = n = \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases}$$

→ Start

$$a^{m} \div a^{n} = \underbrace{\frac{a^{m}}{a^{n}}}_{a^{n}} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{1}}_{n}, m > n \\ \frac{1}{1}, m = n = 1 \end{cases} \begin{cases} a^{m-n}, m > n \\ 1, m = n \end{cases}$$

► Start

$$a^{m} \div a^{n} = \underbrace{\frac{a^{m}}{a^{n}}}_{n} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{1}}_{n}, m > n \\ \frac{1}{1}, m = n = 1 \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases} + \underbrace{\begin{cases} a^{m-n}, m > n \\ 1, m = n \\ \frac{1}{a^{n-m}}, m < n \end{cases}}_{n}$$

▶ Start

$$a^{m} \div a^{n} = \underbrace{\frac{a^{m}}{a^{n}} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}}_{=\underbrace{\frac{1}{1}}, m = n} = \begin{cases} a^{m-n}, m > n \\ \frac{1}{1}, m = n \\ \frac{1}{a \times \cdots \times a}, m < n \end{cases} = \begin{bmatrix} a^{m-n}, m > n \\ 1, m = n \\ \frac{1}{a^{n-m}}, m < n \end{cases}$$

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

$$= \begin{cases} \underbrace{\overbrace{\frac{a \times \cdots \times a}{1}}_{1}}_{1}, m > n \\ \underbrace{\frac{1}{1}}_{1}, m = n = 1 \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases} + \underbrace{\begin{cases} a^{m-n}, m > n \\ 1, m = n \\ \underbrace{\frac{1}{a^{n-m}}, m < n}}_{n} \end{cases}}_{n}$$

$$\therefore a^m$$

$$a^{m} \div a^{n} = \underbrace{\frac{a^{m}}{a^{n}}}_{n} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

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$$\therefore a^m \div$$

$$a^{m} \div a^{n} = \underbrace{\frac{a^{m}}{a^{n}}}_{n} = \underbrace{\frac{a \times \cdots \times a}{a \times \cdots \times a}}_{n}$$

$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{1}}_{n}, m > n \\ \frac{1}{1}, m = n = \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases} + \underbrace{\begin{cases} a^{m-n}, m > n \\ 1, m = n \\ \frac{1}{a^{n-m}}, m < n \end{cases}}_{n}$$

$$\therefore a^m \div a^n$$

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$$\therefore a^{m} \div a^{n} = \begin{cases} a^{m-n}, m > n \\ \frac{1}{a^{n-m}}, m < n \end{cases}$$

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$$= \begin{cases} \underbrace{\frac{a \times \cdots \times a}{1}}_{n-m}, m > n \\ \frac{1}{1}, m = n \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m}, m < n \end{cases} + \begin{cases} a^{m-n}, m > n \\ 1, m = n \\ \underbrace{\frac{1}{a^{n-m}}}_{n-m}, m < n \end{cases}$$

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$$= \begin{cases} \underbrace{\overbrace{a \times \cdots \times a}^{m-n}}_{1} &, m > n \\ \frac{1}{1} &, m = n \\ \underbrace{\frac{1}{a \times \cdots \times a}}_{n-m} &, m < n \end{cases} = \begin{cases} a^{m-n} &, m > n \\ 1 &, m = n \\ \underbrace{\frac{1}{a^{n-m}}}_{n-m} &, m < n \end{cases}$$

$$\therefore a^{m} \div a^{n} = \begin{cases} a^{m-n} &, m > n \\ 1 &, m = n \\ \underbrace{\frac{1}{a^{n-m}}}_{n-m} &, m < n \end{cases}$$

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▶ Home

**END**