차의 극한은 극한의 차이다.
(The limit of a difference is the difference of the limits.)

Start

Theorem

The limit of a difference is the difference of the limits.

Start

Theorem

$\lim_{x \to a} f(x) = L$

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Theorem

$\lim\limits_{x \to a} f(x) = L$, $\lim\limits_{x \to a} g(x) = M$

The limit of a difference is the difference of the limits.

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Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

$$\lim_{x \to a} \{f(x) - g(x)\}$$

The limit of a difference is the difference of the limits.

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Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

$$\lim_{x \to a} \{f(x) - g(x)\} = L - M$$

The limit of a difference is the difference of the limits.

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Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

$$\lim_{x \to a} \{f(x) - g(x)\} = L - M$$

Proof.

The limit of a difference is the difference of the limits.

Start

Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

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Proof.

$\lim_{x \to a} \{f(x) - g(x)\}$

The limit of a difference is the difference of the limits.

Start

Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

$$\lim_{x \to a} \{f(x) - g(x)\} = L - M$$

Proof.

$$\lim_{x \to a} \{f(x) - g(x)\} = \lim_{x \to a} \{f(x) + (-1) \cdot g(x)\}$$

Start

Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

$$\lim_{x \to a} \{f(x) - g(x)\} = L - M$$

Proof.

$$\begin{aligned} \lim_{x \to a} \{f(x) - g(x)\} &= \lim_{x \to a} \{f(x) + (-1) \cdot g(x)\} \\ &= \lim_{x \to a} f(x) + \lim_{x \to a} \{(-1) \cdot g(x)\} \end{aligned}$$

The limit of a difference is the difference of the limits.

Start

Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

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The limit of a difference is the difference of the limits.

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$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

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\lim_{x \to a} \{f(x) - g(x)\} &= \lim_{x \to a} \{f(x) + (-1) \cdot g(x)\} \\
&= \lim_{x \to a} f(x) + \lim_{x \to a} \{(-1) \cdot g(x)\} \ (\because \text{Sum Law}) \\
&= \lim_{x \to a} f(x) + (-1) \cdot \lim_{x \to a} g(x)
\end{aligned}$$

The limit of a difference is the difference of the limits.

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Theorem

$\lim_{x\to a} f(x) = L$, $\lim_{x\to a} g(x) = M$

$$\lim_{x\to a}\{f(x) - g(x)\} = L - M$$

Proof.

$$\begin{aligned}
\lim_{x\to a}\{f(x) - g(x)\} &= \lim_{x\to a}\{f(x) + (-1)\cdot g(x)\} \\
&= \lim_{x\to a} f(x) + \lim_{x\to a}\{(-1)\cdot g(x)\} \ (\because \text{Sum Law}) \\
&= \lim_{x\to a} f(x) + (-1)\cdot \lim_{x\to a} g(x) \ (\because \text{Constant Multiple Law})
\end{aligned}$$

The limit of a difference is the difference of the limits.

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Theorem

$\lim_{x \to a} f(x) = L$, $\lim_{x \to a} g(x) = M$

$$\lim_{x \to a} \{f(x) - g(x)\} = L - M$$

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\lim_{x \to a} \{f(x) - g(x)\} &= \lim_{x \to a} \{f(x) + (-1) \cdot g(x)\} \\
&= \lim_{x \to a} f(x) + \lim_{x \to a} \{(-1) \cdot g(x)\} \ (\because \text{Sum Law}) \\
&= \lim_{x \to a} f(x) + (-1) \cdot \lim_{x \to a} g(x) \ (\because \text{Constant Multiple Law}) \\
&= L - M
\end{aligned}$$

$\square$

The limit of a difference is the difference of the limits.

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