

1 Definition

string	
	method

2 Method

1.
- javascript_to_php
- convert *javascript* math constants to php constants

javascript_to_php	<i>javascript</i>	
	$patterns = \left[\begin{array}{c} \text{Math.E} \mid \text{Math.LN2} \mid \text{Math.LN10} \mid \text{Math.LOG2E} \mid \text{Math.LOG10E} \mid \text{Math.PI} \mid \text{Math.SQRT1.2} \mid \text{Math.SQRT2} \mid \text{NaN} \mid \text{POSITIVE_INFINITY} \mid \text{NEGATIVE_INFINITY} \end{array} \right]$	
	$replacements = \left[\begin{array}{c} \text{M.E} \mid \text{M.LN2} \mid \text{M.LN2} \mid \text{M.LN10} \mid \text{M.LOG2E} \mid \text{M.LOG10E} \mid \text{M.PI} \mid \text{M.SQRT1.2} \mid \text{M.SQRT2} \mid \text{NAN} \mid \text{INF} \mid \text{-INF} \end{array} \right]$	
	<div>RE</div>	$\text{str_replace} \left(\begin{array}{c} \text{Math.} \\ \emptyset \\ \text{preg_replace} \left(\begin{array}{c} patterns \\ replacements \\ javascript \end{array} \right) \end{array} \right)$

2.
- evaluation_xy
- evaluate *expression* with *x* and *y*

evaluation_xy	<i>x</i>	<i>y</i>	<i>expression</i>
	$\text{str_replace} \left(\begin{array}{c} x \\ x \\ \text{str_replace} \left(\begin{array}{c} y \\ y \\ expression \end{array} \right) \end{array} \right)$		

3.
- latex_separation
- separate latex *string* by space character

[illegible]

WH	$\text{substr} \left(\begin{array}{c} string \\ 0 \\ functions_length[\backslash\text{frac}] \end{array} \right) \equiv \backslash\text{frac}$																
$\equiv \left[\begin{array}{c} key_numerator_start \\ functions_length[\backslash\text{frac}] \end{array} \right]$																	
FO	<div><div>$key_numerator_start \leq i < string$</div><div><div>$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$<table><tr><td>IF</td><td>$character \equiv \{$</td><td>$\begin{array}{c} + \\ + \end{array} parenthesis_sign$</td></tr><tr><td></td><td>$character \equiv \}$</td><td>$\begin{array}{c} - \\ - \end{array} parenthesis_sign$</td></tr></table><div><div><div>IF</div><div>$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$</div><div><div>$part = \emptyset$</div><div>$part[\text{type}] = \backslash\text{frac}$</div><div>$part[\text{value}] = \emptyset$</div><div>$part \left[\begin{array}{c} value \\ numerator \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key_numerator_start \\ i - key_numerator_start \end{array} \right)$</div><div>$\equiv \left[\begin{array}{c} key_denominator_start \\ i + 2 \end{array} \right]$</div><div>BR</div></div></div></div></div></div></div> <tr><td colspan="2">$parenthesis_sign = 0$</td></tr> <tr><td>FO</td><td><div><div>$key_denominator_start \leq i < string$</div><div><div>$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$<table><tr><td>IF</td><td>$character \equiv \{$</td><td>$\begin{array}{c} + \\ + \end{array} parenthesis_sign$</td></tr><tr><td></td><td>$character \equiv \}$</td><td>$\begin{array}{c} - \\ - \end{array} parenthesis_sign$</td></tr></table><div><div><div>IF</div><div>$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$</div><div><div>$part \left[\begin{array}{c} value \\ denominator \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key_denominator_start \\ i - key_denominator_start \end{array} \right)$</div><div>$parts \pm part$</div><div>$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$</div><div>BR</div></div></div></div></div></div></div></td></tr>	IF	$character \equiv \{$	$\begin{array}{c} + \\ + \end{array} parenthesis_sign$		$character \equiv \}$	$\begin{array}{c} - \\ - \end{array} parenthesis_sign$	$parenthesis_sign = 0$		FO	<div><div>$key_denominator_start \leq i < string$</div><div><div>$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$<table><tr><td>IF</td><td>$character \equiv \{$</td><td>$\begin{array}{c} + \\ + \end{array} parenthesis_sign$</td></tr><tr><td></td><td>$character \equiv \}$</td><td>$\begin{array}{c} - \\ - \end{array} parenthesis_sign$</td></tr></table><div><div><div>IF</div><div>$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$</div><div><div>$part \left[\begin{array}{c} value \\ denominator \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key_denominator_start \\ i - key_denominator_start \end{array} \right)$</div><div>$parts \pm part$</div><div>$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$</div><div>BR</div></div></div></div></div></div></div>	IF	$character \equiv \{$	$\begin{array}{c} + \\ + \end{array} parenthesis_sign$		$character \equiv \}$	$\begin{array}{c} - \\ - \end{array} parenthesis_sign$
IF	$character \equiv \{$	$\begin{array}{c} + \\ + \end{array} parenthesis_sign$															
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IF	$character \equiv \{$	$\begin{array}{c} + \\ + \end{array} parenthesis_sign$															
	$character \equiv \}$	$\begin{array}{c} - \\ - \end{array} parenthesis_sign$															

FO	pairs_left_length		pair_left	pair_left_length	
	WH	$\text{substr} \begin{pmatrix} string \\ 0 \\ pair_left_length \end{pmatrix} \equiv pair_left$			
		$\equiv \begin{bmatrix} key_pair_start \\ pair_left_length \end{bmatrix}$			
		$\equiv \begin{bmatrix} pair_right_length \\ pairs_right_length[pairs[pair_left]] \end{bmatrix}$			
		parenthesis_sign = 0			
	FO	key_parenthesis_start ≤ i < string			
		IF	$\text{substr} \begin{pmatrix} string \\ 0 \\ pair_left_length \end{pmatrix} \equiv pair_left$	$\overset{+}{+}parenthesis_sign$	
			$\text{substr} \begin{pmatrix} string \\ 0 \\ pair_right_length \end{pmatrix} \equiv \emptyset$	$\overset{-}{-}parenthesis_sign$	
		IF	$\equiv \begin{bmatrix} parenthesis_sign \\ 0 \end{bmatrix}$	part = ∅	
				part[type] = pair_left	
				part[value] = substr $\begin{pmatrix} string \\ i - key_parenthesis_start \end{pmatrix}$	
				parts $\overset{+}{=}$ part	
				string = substr $\begin{pmatrix} string \\ i + pair_right_length \end{pmatrix}$	
				BR	

WH	$\text{substr} \left(\begin{array}{c} string \\ 0 \\ functions.length[\backslash nthroot] \end{array} \right) \equiv \backslash nthroot$			
	$\equiv \left[\begin{array}{c} key.index.start \\ functions.length[\backslash nthroot] \end{array} \right]$			
	$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$			
FO	$key.index.start \leq i < string $			
	$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$			
	IF	$character \equiv [$	$\begin{array}{c} + \\ + parenthesis_sign \end{array}$	
		$character \equiv]$	$\begin{array}{c} - \\ - parenthesis_sign \end{array}$	
	IF	$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$	$part = \emptyset$	
			$part[type] = \backslash nthroot$	
			$part[value] = \emptyset$	
			$part \left[\begin{array}{c} value \\ index \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key.index.start \\ i - key.index.start \end{array} \right)$	
			$\equiv \left[\begin{array}{c} key_radicand.start \\ i + 1 \end{array} \right]$	
			BR	
$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$				
FO	$key_radicand.start \leq i < string $			
	$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$			
	IF	$character \equiv \{$	$\begin{array}{c} + \\ + parenthesis_sign \end{array}$	
		$character \equiv \}$	$\begin{array}{c} - \\ - parenthesis_sign \end{array}$	
	IF	$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$	$part \left[\begin{array}{c} value \\ radicand \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key_radicand.start \\ i - key_radicand.start \end{array} \right)$	
			$parts \overset{\pm}{=} part$	
			$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$	
			BR	

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WH	$\text{substr} \left(\begin{array}{c} string \\ 0 \\ functions.length[\backslash\text{sqrt}] \end{array} \right) \equiv \backslash\text{sqrt}$													
	$\equiv \left[\begin{array}{c} key_sqrt_start \\ i + functions.length[\backslash\text{sqrt}] \end{array} \right]$													
	$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$													
FO	$key_sqrt_start \leq i < string $ <div>$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$<table><tr><td>IF</td><td>$character \equiv \left\{ \begin{array}{c} + \\ + parenthesis_sign \end{array} \right.$</td></tr><tr><td></td><td>$character \equiv \left\{ \begin{array}{c} - \\ - parenthesis_sign \end{array} \right.$</td></tr></table><table><tr><td>IF</td><td>$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$</td><td><table><tr><td>$part = \emptyset$</td></tr><tr><td>$part[\text{type}] = \backslash\text{sqrt}$</td></tr><tr><td>$part[\text{value}] = \text{substr} \left(\begin{array}{c} string \\ i - key_sqrt_start \end{array} \right)$</td></tr><tr><td>$parts \stackrel{\pm}{=} part$</td></tr><tr><td>$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$</td></tr><tr><td>BR</td></tr></table></td></tr></table></div>	IF	$character \equiv \left\{ \begin{array}{c} + \\ + parenthesis_sign \end{array} \right.$		$character \equiv \left\{ \begin{array}{c} - \\ - parenthesis_sign \end{array} \right.$	IF	$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$	<table><tr><td>$part = \emptyset$</td></tr><tr><td>$part[\text{type}] = \backslash\text{sqrt}$</td></tr><tr><td>$part[\text{value}] = \text{substr} \left(\begin{array}{c} string \\ i - key_sqrt_start \end{array} \right)$</td></tr><tr><td>$parts \stackrel{\pm}{=} part$</td></tr><tr><td>$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$</td></tr><tr><td>BR</td></tr></table>	$part = \emptyset$	$part[\text{type}] = \backslash\text{sqrt}$	$part[\text{value}] = \text{substr} \left(\begin{array}{c} string \\ i - key_sqrt_start \end{array} \right)$	$parts \stackrel{\pm}{=} part$	$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$	BR
IF	$character \equiv \left\{ \begin{array}{c} + \\ + parenthesis_sign \end{array} \right.$													
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$parts \stackrel{\pm}{=} part$														
$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$														
BR														

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WH	$\text{substr} \left(\begin{array}{c} string \\ 0 \\ functions.length[\backslash\text{text}] \end{array} \right) \equiv \backslash\text{text}$	
	$\left[\begin{array}{c} key_text_start \\ functions.length[\backslash\text{text}] \end{array} \right]$	
	$\left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$	
FO	$key_text_start \leq i < string $	
	$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$	
	IF	$character \equiv \{ \begin{array}{c} + \\ parenthesis_sign \end{array}$
		$character \equiv \} \begin{array}{c} - \\ parenthesis_sign \end{array}$
	IF	$\left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$
$part[\text{type}] = \backslash\text{text}$		
$part[\text{value}] = \text{substr} \left(\begin{array}{c} string \\ i - key_text_start \end{array} \right)$		
$parts \overset{\pm}{=} part$		
$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$		
BR		

6	SW	$\vee \text{ substr} \begin{pmatrix} string \\ 1 \\ 1 \end{pmatrix} \equiv \wedge$ $\text{substr} \begin{pmatrix} string \\ 0 \\ 1 \end{pmatrix} \equiv \{$	
		<div> <div>IF</div> <div> $\text{substr} \begin{pmatrix} string \\ 1 \\ 1 \end{pmatrix} \equiv \wedge$ </div> <div> $\text{part} = \emptyset$ $\text{part}[\text{type}] = \wedge$ $\text{part}[\text{value}] = \emptyset$ $\text{part} \begin{bmatrix} \text{value} \\ \text{base} \end{bmatrix} = \text{substr} \begin{pmatrix} string \\ 0 \\ 1 \end{pmatrix}$ <div>sublevel</div> </div> </div> <div> <div> $\text{substr} \begin{pmatrix} string \\ 0 \\ 1 \end{pmatrix} \equiv \{$ </div> <div> $is_power = \text{TR}$ $\equiv \begin{bmatrix} key_base_start \\ 1 \end{bmatrix}$ $\equiv \begin{bmatrix} parenthesis_sign \\ 0 \end{bmatrix}$ <div>sublevel</div> <div>sublevel</div> </div> </div>	

6	1	IF	$\text{substr} \begin{pmatrix} string \\ 2 \\ 1 \end{pmatrix} \neq \{$ $\text{part} \begin{bmatrix} \text{value} \\ \text{power} \end{bmatrix} = \text{substr} \begin{pmatrix} string \\ 1 \\ 1 \end{pmatrix}$ $parts \overset{\pm}{=} part$	
			$\equiv \begin{bmatrix} key_power_start \\ 2 \end{bmatrix}$	
			$\equiv \begin{bmatrix} parenthesis_sign \\ 0 \end{bmatrix}$	
		FO	$key_power_start \leq i < string $ $character = \text{substr} \begin{pmatrix} string \\ i \\ 1 \end{pmatrix}$ <div> <div>IF</div> <div> $character \equiv \{ \begin{matrix} + \\ - \end{matrix} parenthesis_sign$ $character \equiv \{ \begin{matrix} + \\ - \end{matrix} parentehsis_sign$ </div> </div> <div> <div>IF</div> <div> $\equiv \begin{bmatrix} parenthesis_sign \\ 0 \end{bmatrix}$ </div> <div> $\text{part} \begin{bmatrix} \text{value} \\ \text{power} \end{bmatrix} = \text{substr} \begin{pmatrix} string \\ i - key_power_start \end{pmatrix}$ $parts \overset{\pm}{=} part$ $string = \text{substr} \begin{pmatrix} string \\ i + 1 \end{pmatrix}$ <div>BR</div> </div> </div>	

FO

$1 \leq i < |string|$

$$character = \text{substr} \left(\begin{array}{c} string \\ i \\ 1 \end{array} \right)$$

IF	$character \equiv \{ \begin{array}{c} + \\ +parenthesis_sign \end{array}$
	$character \equiv \{ \begin{array}{c} - \\ -parenthesis_sign \end{array}$

IF	$\equiv \left[\begin{array}{c} parenthesis_sign \\ 0 \end{array} \right]$	<table><tr><td rowspan="2">IF</td><td rowspan="2">$\text{substr} \left(\begin{array}{c} string \\ i + 1 \\ 1 \end{array} \right) \equiv \wedge$</td><td>$part = \emptyset$</td></tr><tr><td>$part[\text{type}] = \wedge$</td></tr><tr><td></td><td></td><td>$part[\text{value}] = \emptyset$</td></tr><tr><td></td><td></td><td>$part \left[\begin{array}{c} \text{value} \\ \text{base} \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key_base_start \\ i - key_base_start \end{array} \right)$</td></tr><tr><td></td><td></td><td>$\equiv \left[\begin{array}{c} key_power_symbol \\ i + 1 \end{array} \right]$</td></tr><tr><td></td><td></td><td>BR</td></tr></table>	IF	$\text{substr} \left(\begin{array}{c} string \\ i + 1 \\ 1 \end{array} \right) \equiv \wedge$	$part = \emptyset$	$part[\text{type}] = \wedge$			$part[\text{value}] = \emptyset$			$part \left[\begin{array}{c} \text{value} \\ \text{base} \end{array} \right] = \text{substr} \left(\begin{array}{c} string \\ key_base_start \\ i - key_base_start \end{array} \right)$			$\equiv \left[\begin{array}{c} key_power_symbol \\ i + 1 \end{array} \right]$			BR
					IF	$\text{substr} \left(\begin{array}{c} string \\ i + 1 \\ 1 \end{array} \right) \equiv \wedge$	$part = \emptyset$											
$part[\text{type}] = \wedge$																		
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		$\equiv \left[\begin{array}{c} key_power_symbol \\ i + 1 \end{array} \right]$																
		BR																
		<table><tr><td>$part = \emptyset$</td></tr><tr><td>$part[\text{type}] = \{$</td></tr><tr><td>$part[\text{value}] = \text{substr} \left(\begin{array}{c} string \\ key_base_start \\ i - key_base_start \end{array} \right)$</td></tr><tr><td>$parts \stackrel{+}{=} part$</td></tr><tr><td>$is_power = \text{FA}$</td></tr><tr><td>$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$</td></tr><tr><td>BR</td></tr></table>	$part = \emptyset$	$part[\text{type}] = \{$	$part[\text{value}] = \text{substr} \left(\begin{array}{c} string \\ key_base_start \\ i - key_base_start \end{array} \right)$	$parts \stackrel{+}{=} part$	$is_power = \text{FA}$	$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$	BR									
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$is_power = \text{FA}$																		
$string = \text{substr} \left(\begin{array}{c} string \\ i + 1 \end{array} \right)$																		
BR																		

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6	3	IF	is_power	<div>IF</div> <div><div>substr$\left(\begin{array}{c}string\\key_power_symbol+1\\1\end{array}\right)\neq\{part\left[\begin{array}{c}value\\power\end{array}\right]=\text{substr}\left(\begin{array}{c}string\\key_power_symbol+1\\1\end{array}\right)$</div></div>	
				<div><div>$\equiv\left[\begin{array}{c}key_power_start\\key_power_symbol+2\end{array}\right]$</div></div>	
				<div><div>$\equiv\left[\begin{array}{c}parenthesis_sign\\0\end{array}\right]$</div></div>	
				<div>FO</div> <div><div><div>$\equiv\left[\begin{array}{c}i\\key_power_start\end{array}\right]$</div><div>$i< string$</div><div>$i-$</div></div></div>	
				<div><div><div><div>$character=\text{substr}\left(\begin{array}{c}string\\i\\1\end{array}\right)$</div></div></div></div>	
				<div><div>IF</div><div><div>$character\equiv\{\begin{array}{c}+\\+parenthesis\end{array}$</div><div>$character\equiv\{\begin{array}{c}-\\-parenthesis\end{array}$</div></div></div>	
				<div><div>IF</div><div><div>$\equiv\left[\begin{array}{c}parenthesis_sign\\0\end{array}\right]$</div><div><div><div><div>$part\left[\begin{array}{c}value\\power\end{array}\right]=\text{substr}\left(\begin{array}{c}string\\key_power_start\\i-key_power_start\end{array}\right)$</div><div>$parts\overset{\pm}{=}part$</div><div>$string=\text{substr}\left(\begin{array}{c}string\\i+1\end{array}\right)$</div><div>BR</div></div></div></div></div></div>	

2	\frac	$numerator_size = this \blacktriangleright \text{latex_size} \left(part \left[\begin{smallmatrix} \text{value} \\ \text{numerator} \end{smallmatrix} \right] \right)$
		$denominator_size = this \blacktriangleright \text{latex_size} \left(part \left[\begin{smallmatrix} \text{value} \\ \text{denominator} \end{smallmatrix} \right] \right)$
		$latex_size \blacktriangleright x \pm \max \left(\frac{numerator_size \blacktriangleright x}{denominator_size \blacktriangleright x} \right) + \frac{1}{3.5}$
		$latex_size \blacktriangleright y \pm \boxed{+} \left[\begin{smallmatrix} numerator_size \blacktriangleright y \\ denominator_size \blacktriangleright y \\ \frac{1}{10} \end{smallmatrix} \right]$
3	\nthroot	$index_size = this \blacktriangleright \text{latex_size} \left(part \left[\begin{smallmatrix} \text{value} \\ \text{index} \end{smallmatrix} \right] \right)$
		$\boxed{\frac{\times}{=}} \left[\begin{smallmatrix} index_size \blacktriangleright x \\ \frac{7}{8} \end{smallmatrix} \right]$
		$\boxed{\frac{\times}{=}} \left[\begin{smallmatrix} index_size \blacktriangleright y \\ \frac{7}{8} \end{smallmatrix} \right]$
		$index_size \blacktriangleright x = \max \left(\frac{3}{14} \right)$
		$radicand_size = this \blacktriangleright \text{latex_size} \left(part \left[\begin{smallmatrix} \text{value} \\ \text{radicand} \end{smallmatrix} \right] \right)$
		$radicand_size \blacktriangleright x = \max \left(\frac{3}{7} \right)$
		$width_space = \frac{1}{11} + \frac{1}{5.5} + \frac{1}{7} + \frac{1}{12} + \frac{1}{17.5}$
		$height_space = \frac{1}{16}$
		$latex_size \blacktriangleright x \pm \max \left(\frac{5}{5.4} \times ratio \right. \left. \boxed{+} \left[\begin{smallmatrix} index_size \blacktriangleright x \\ radicand_size \blacktriangleright x \\ width_space \end{smallmatrix} \right] \right)$
		$latex_size \blacktriangleright y \pm \max \left(\frac{4}{5} \times ratio \right. \left. \boxed{+} \left[\begin{smallmatrix} index_size \blacktriangleright y \\ radicand_size \blacktriangleright x \\ width_space \end{smallmatrix} \right] \right)$
4	\sqrt	$\boxed{=}\left[\begin{smallmatrix} part_size \\ this \blacktriangleright \text{latex_size} (part[\text{value}]) \end{smallmatrix}\right]$
		$latex_size \blacktriangleright x \pm \boxed{+}\left[\begin{smallmatrix} part_size \blacktriangleright x \\ \frac{2}{2} - \frac{1}{3.2} \end{smallmatrix}\right]$
		$latex_size \blacktriangleright y \pm \boxed{+}\left[\begin{smallmatrix} part_size \blacktriangleright y \\ \frac{2}{3.2} - \frac{2}{3.7} \end{smallmatrix}\right]$
5	\text	$\boxed{=}\left[\begin{smallmatrix} part_size \\ this \blacktriangleright \text{text_size} (part[\text{value}]) \end{smallmatrix}\right]$
		$\boxed{\pm}\left[\begin{smallmatrix} latex_size \blacktriangleright x \\ part_size \blacktriangleright x \end{smallmatrix}\right]$
		$\boxed{\pm}\left[\begin{smallmatrix} latex_size \blacktriangleright y \\ part_size \blacktriangleright y \end{smallmatrix}\right]$

6	^	$base_size = this \blacktriangleright \text{latex_size} \left(part \left[\begin{array}{c} \text{value} \\ \text{base} \end{array} \right] \right)$
		$power_size = this \blacktriangleright \text{latex_size} \left(part \left[\begin{array}{c} \text{value} \\ \text{power} \end{array} \right] \right)$
		$latex_size \blacktriangleright^{\pm} \boxed{+} \left[\begin{array}{c} base_size \blacktriangleright x \\ power_size \blacktriangleright x \end{array} \right]$
		$latex_size \blacktriangleright y^{\pm} \boxed{+} \left[\begin{array}{c} \frac{1}{2} \times base_size \blacktriangleright y \\ \max \left(\frac{1}{2} \times base_size \blacktriangleright y, power_size \blacktriangleright y \right) \end{array} \right]$

7	{	$\boxed{=}\left[\begin{array}{c} part_size \\ this \blacktriangleright \text{latex_size}(part[\text{value}]) \end{array}\right]$
		$\boxed{\pm}\left[\begin{array}{c} latex_size \blacktriangleright x \\ part_size \blacktriangleright x \end{array}\right]$
		$\boxed{\pm}\left[\begin{array}{c} latex_size \blacktriangleright y \\ part_size \blacktriangleright y \end{array}\right]$

8	character	$\boxed{=}\left[\begin{array}{c} part_size \\ this \blacktriangleright \text{latex_size.character}(part[\text{value}]) \end{array}\right]$
		$\boxed{\pm}\left[\begin{array}{c} latex_size \blacktriangleright x \\ part_size \blacktriangleright x \end{array}\right]$
		$\boxed{\pm}\left[\begin{array}{c} latex_size \blacktriangleright y \\ part_size \blacktriangleright y \end{array}\right]$

5. latex_size.character latex size of character

latex_size.character	<i>character</i>	
	<i>widths</i> = {}	
	sublevel	
	sublevel	
	sublevel	
	sublevel	
	$height_standard = \frac{2}{3.5}$	
	$width_standard = \frac{2}{3.5}$	
	<div>IF</div>	<div>array_key_exists (<i>character</i>) <i>widths</i>)</div>
	<div>RE</div>	<div>xy (<i>widths</i>[<i>character</i>]) <i>height_standard</i>)</div>
	<div>RE</div>	<div>xy (<i>width_standard</i>) <i>height_standard</i>)</div>

1

$widths \models \left[\begin{array}{c|c|c|c|c|c|c|c|c|c} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 0 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 \end{array} \right]$

widths	\models	$\left[\begin{array}{c c c c c c c c c c c c c c c c c c c c} \text{a} & \text{b} & \text{c} & \text{d} & \text{e} & \text{f} & \text{g} & \text{h} & \text{k} & \text{n} & \text{o} & \text{p} & \text{q} & \text{r} & \text{s} & \text{u} & \text{x} & \text{y} & \text{z} \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 & 3.2 \end{array} \right]$
		$\left[\begin{array}{c c c c} \text{i} & \text{j} & \text{l} & \text{t} \\ \hline 1 & 1 & 1 & 1 \\ \hline 6 & 6 & 6 & 6 \end{array} \right]$
widths	\models	$\left[\begin{array}{c c} \text{m} & \text{w} \\ \hline 1 & 1 \\ \hline 2.5 & 2.5 \end{array} \right]$

6	$widths \parallel_C \left[\frac{\backslash triangle}{1 \atop 2.2} \right]$
	$widths \parallel_C \left[\frac{\backslash circle}{1 \atop 6} \right]$
7	$widths \parallel_C \left[\frac{\backslash omega}{1 \atop 2.3} \right]$
	$widths \parallel_C \left[\frac{\backslash psi}{1 \atop 2.7} \right]$
	$widths \parallel_C \left[\frac{\backslash varpsi}{1 \atop 3} \right]$
	$widths \parallel_C \left[\frac{\backslash alpha}{1 \atop 3.2} \mid \frac{\backslash beta}{1 \atop 3.2} \mid \frac{\backslash eta}{1 \atop 3.2} \mid \frac{\backslash mu}{1 \atop 3.2} \mid \frac{\backslash pi}{1 \atop 3.2} \mid \frac{\backslash theta}{1 \atop 3.2} \mid \frac{\backslash varrho}{1 \atop 3.2} \mid \frac{\backslash vartheta}{1 \atop 3.2} \mid \frac{\backslash phi}{1 \atop 3.2} \right]$
	$widths \parallel_C \left[\frac{\backslash sigma}{1 \atop 3.3} \right]$
	$widths \parallel_C \left[\frac{\backslash delta}{1 \atop 3.5} \mid \frac{\backslash kappa}{1 \atop 3.5} \mid \frac{\backslash lambda}{1 \atop 3.5} \mid \frac{\backslash rho}{1 \atop 3.5} \mid \frac{\backslash upsilon}{1 \atop 3.5} \right]$
	$widths \parallel_C \left[\frac{\backslash nu}{1 \atop 3.7} \mid \frac{\backslash xi}{1 \atop 3.7} \mid \frac{\backslash chi}{1 \atop 3.7} \right]$
8	$widths \parallel_C \left[\frac{\backslash gamma}{1 \atop 4.2} \mid \frac{\backslash epsilon}{1 \atop 4.2} \mid \frac{\backslash varepsilon}{1 \atop 4.2} \mid \frac{\backslash zeta}{1 \atop 4.2} \right]$
	$widths \parallel_C \left[\frac{\backslash tau}{1 \atop 4.5} \right]$
	$widths \parallel_C \left[\frac{\backslash iota}{1 \atop 6} \right]$
	$widths \parallel_C \left[\frac{\backslash Pi}{1 \atop 2.3} \right]$
	$widths \parallel_C \left[\frac{\backslash Phi}{1 \atop 2.4} \mid \frac{\backslash Psi}{1 \atop 2.4} \mid \frac{\backslash Omega}{1 \atop 2.4} \right]$
	$widths \parallel_C \left[\frac{\backslash Lambda}{1 \atop 2.5} \mid \frac{\backslash Sigma}{1 \atop 2.5} \right]$
9	$widths \parallel_C \left[\frac{\backslash Upsilon}{1 \atop 2.6} \right]$
	$widths \parallel_C \left[\frac{\backslash Gamma}{1 \atop 2.7} \mid \frac{\backslash Xi}{1 \atop 2.7} \right]$
	$widths \parallel_C \left[\frac{\backslash Delta}{1 \atop 2.9} \right]$
	$widths \parallel_C \left[\frac{\backslash Theta}{1 \atop 2.3} \right]$
10	$widths \parallel_C \left[\frac{\backslash leftharpoonupdown}{1 \atop 1.7} \mid \frac{\backslash leftharpoonup}{1 \atop 1.7} \mid \frac{\backslash rightharpoonupdown}{1 \atop 1.7} \mid \frac{\backslash rightharpoonup}{1 \atop 1.7} \right]$
10	$widths \parallel_C \left[\frac{\backslash ge}{1 \atop 1.5} \mid \frac{\backslash geq}{1 \atop 1.5} \mid \frac{\backslash gg}{1 \atop 1.5} \mid \frac{\backslash le}{1 \atop 1.5} \mid \frac{\backslash ll}{1 \atop 1.5} \mid \frac{\backslash ne}{1 \atop 1.5} \mid \frac{\backslash neq}{1 \atop 1.5} \mid \frac{\backslash <}{1 \atop 1.5} \mid \frac{\backslash >}{1 \atop 1.5} \right]$

11	$widths \models_{\mathbb{C}} \left[\begin{array}{c c} \frac{\backslash in}{1} & \frac{\backslash ni}{1} \\ \hline 1.5 & 1.5 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c} \frac{\backslash bot}{1} & \frac{\backslash top}{1} & \frac{\backslash wp}{1} \\ \hline 2.2 & 2.2 & 2.2 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash RE}{1} \\ \hline 2.3 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash IM}{1} \\ \hline 2.7 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c} \frac{\backslash forall}{1} & \frac{\backslash exists}{1} & \frac{\backslash hbar}{1} \\ \hline 3 & 3 & 3 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash partial}{1} \\ \hline 3.2 \end{array} \right]$
12	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c c c c} \frac{\backslash arccos}{1} & \frac{\backslash arcsin}{1} & \frac{\backslash arctan}{1} & \frac{\backslash inflim}{1} & \frac{\backslash liminf}{1} & \frac{\backslash limsup}{1} \\ \hline 0.5 & 0.5 & 0.5 & 0.5 & 0.5 & 0.5 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c} \frac{\backslash hom}{1} & \frac{\backslash max}{1} & \frac{\backslash tanh}{1} \\ \hline 0.8 & 0.8 & 0.8 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c} \frac{\backslash cosh}{1} & \frac{\backslash coth}{1} & \frac{\backslash sinh}{1} \\ \hline 0.9 & 0.9 & 0.9 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c} \frac{\backslash dim}{1} & \frac{\backslash exp}{1} & \frac{\backslash min}{1} \\ \hline 1 & 1 & 1 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c c c c} \frac{\backslash arg}{1} & \frac{\backslash cos}{1} & \frac{\backslash deg}{1} & \frac{\backslash gcd}{1} & \frac{\backslash sup}{1} & \frac{\backslash tan}{1} \\ \hline 1.1 & 1.1 & 1.1 & 1.1 & 1.1 & 1.1 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c c} \frac{\backslash deg}{1} & \frac{\backslash ker}{1} & \frac{\backslash lim}{1} & \frac{\backslash log}{1} \\ \hline 1.2 & 1.2 & 1.2 & 1.2 \end{array} \right]$
13	$widths \models_{\mathbb{C}} \left[\begin{array}{c c c c c} \frac{\backslash cot}{1} & \frac{\backslash csc}{1} & \frac{\backslash inf}{1} & \frac{\backslash sec}{1} & \frac{\backslash sin}{1} \\ \hline 1.3 & 1.3 & 1.3 & 1.3 & 1.3 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash Pr}{1} \\ \hline 1.7 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c} \frac{\backslash lg}{1} & \frac{\backslash ln}{1} \\ \hline 2 & 2 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash H}{1} \\ \hline 2 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash R}{1} \\ \hline 2.2 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c c} \frac{\backslash C}{1} & \frac{\backslash Z}{1} \\ \hline 2.5 & 2.5 \end{array} \right]$
	$widths \models_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash P}{1} \\ \hline 2.5 \end{array} \right]$

4	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c c c c c c} \frac{\backslash \sim}{1} & \frac{\backslash \#}{1} & \frac{\backslash *}{1} & \frac{\backslash ?}{1} & \frac{\backslash \{ }{1} & \frac{\backslash \} }{1} \\ \hline 3.5 & 3.5 & 3.5 & 3.5 & 3.5 & 3.5 \end{array} \right]$
	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c c c c c c} \frac{\backslash !}{1} & \frac{\backslash (}{1} & \frac{\backslash \rangle}{1} & \frac{\backslash [}{1} & \frac{\backslash]}{1} & \frac{\backslash '}{1} \\ \hline 5 & 5 & 5 & 5 & 5 & 5 \end{array} \right]$
	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash}{1} \\ \hline 1.7 \end{array} \right]$
	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c c} \frac{\backslash \%}{1} & \frac{\backslash \&}{1} \\ \hline 2 & 2 \end{array} \right]$
	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c c c c c} \frac{\backslash ;}{1} & \frac{\backslash :}{1} & \frac{\backslash ,}{1} & \frac{\backslash \cdot}{1} & \frac{\backslash /}{1} \\ \hline 6 & 6 & 6 & 6 & 6 \end{array} \right]$
	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c c} \frac{\backslash '}{1} & \frac{\backslash }{1} \\ \hline 9 & 9 \end{array} \right]$
	$widths \parallel_{\mathbb{C}} \left[\begin{array}{c} \frac{\backslash ""}{1} \\ \hline 1.4 - 1.7 \end{array} \right]$