

Supplemental Arrows-B

Range: 2900–297F

This file contains an excerpt from the character code tables and list of character names for *The Unicode Standard, Version 17.0*.

This file may be changed at any time without notice to reflect errata, or other updates to the Unicode Standard.

See <https://www.unicode.org/errata/> for an up-to-date list of errata.

See <https://www.unicode.org/charts/> for access to a complete list of the latest character code charts. See <https://www.unicode.org/charts/PDF/Unicode-17.0/> for charts showing only the characters added in Unicode 17.0. See <https://www.unicode.org/Public/17.0.0/charts/> for a complete archived file of character code charts for Unicode 17.0. See <https://www.unicode.org/charts/About.html#Conventions> for conventions used in these code charts, and other general information.

Disclaimer

These charts are provided as the online reference to the character contents of the Unicode Standard, Version 17.0 but do not provide all the information needed to fully support individual scripts using the Unicode Standard. For a complete understanding of the use of the characters contained in this file, please consult the appropriate sections of *The Unicode Standard, Version 17.0*, online at <https://www.unicode.org/versions/Unicode17.0.0/>, as well as the *Unicode Standard Annexes*, the other *Unicode Technical Reports* and *Standards*, and the *Unicode Character Database*, which are available online.

See <https://www.unicode.org/ucd/> and <https://www.unicode.org/reports/>

A thorough understanding of the information contained in these additional sources is required for a successful implementation.

Fonts

The shapes of the reference glyphs used in these code charts are not prescriptive. Considerable variation is to be expected in actual fonts.

See <https://www.unicode.org/charts/fonts.html> for a list.

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	290	291	292	293	294	295	296	297
0	➔ 2900	➢—➔ 2910	➡• 2920	✗✓ 2930	○○ 2940	⊸ 2950	₁ 2960	⊸ 2970
1	➔➔ 2901 2911	➡➡ 2921	✗✗ 2931	○○ 2941	₁ 2951	⊸ 2961	⊸➡ 2971
2	↔ 2902	↑ 2912	↗ 2922	✗✗ 2932	↑ 2942	⊸ 2952	↔ 2962	≈ 2972
3	➔ 2903	↓ 2913	↗ 2923	↘ 2933	↗ 2943	⊸ 2953	 2963	↙ 2973
4	↔ 2904	† 2914	↗ 2924	↗ 2934	↗ 2944	⊸ 2954	 2964	↙ 2974
5	⊸ 2905	➔ 2915	↗ 2925	↘ 2935	⊕ 2945	↓ 2955	 2965	≈↗ 2975
6	↔ 2906	➔ 2916	↗ 2926	↘ 2936	↑ 2946	⊸ 2956	↔ 2966	↙ 2976
7	⊸ 2907	➔ 2917	✗✗ 2927	↘ 2937	☒ 2947	⊸ 2957	 2967	↖ 2977
8	↓ 2908	➔ 2918	✗✗ 2928	↘ 2938	↔ 2948	₁ 2958	 2968	↗↑ 2978
9	↑ 2909	↓ 2919	✗✗ 2929	↘ 2939	↑ 2949	↓ 2959	 2969	↑↑ 2979
A	↑↑ 290A	⊸ 291A	✗✗ 292A	↘ 293A	↓ 294A	⊸ 295A	 296A	⊸ 297A
B	↓↓ 290B	⊸ 291B	✗✗ 292B	↘ 293B	↑ 294B	⊸ 295B	 296B	↑↑ 297B
C	←- 290C	⊸ 291C	✗✗ 292C	↘ 293C	↓ 294C	⊸ 295C	 296C	⊸ 297C
D	-→ 290D	↑ 291D	✗✗ 292D	↘ 293D	↑ 294D	⊸ 295D	 296D	⊸ 297D
E	←-- 290E	→• 291E	✗✗ 292E	↘ 293E	⊸ 294E	⊸ 295E	 296E	⊸ 297E
F	---> 290F	↑ 291F	✗✗ 292F	↘ 293F	↓ 294F	⊸ 295F	 296F	⊸ 297F

Miscellaneous arrows

- 2900 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED ARROW WITH VERTICAL STROKE
= z notation partial surjection
 $\rightarrow 2B34 \leftarrow\!\!\!\leftarrow$ leftwards two-headed arrow with vertical stroke
- 2901 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED ARROW WITH DOUBLE VERTICAL STROKE
= z notation finite surjection
 $\rightarrow 2B35 \leftarrow\!\!\!\leftarrow$ leftwards two-headed arrow with double vertical stroke
- 2902 $\leftarrow\!\!\!\leftarrow$ LEFTWARDS DOUBLE ARROW WITH VERTICAL STROKE
- 2903 $\Rightarrow\!\!\!\Rightarrow$ RIGHTWARDS DOUBLE ARROW WITH VERTICAL STROKE
- 2904 $\Leftarrow\!\!\!\Leftarrow$ LEFT RIGHT DOUBLE ARROW WITH VERTICAL STROKE
- 2905 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED ARROW FROM BAR
= maps to
 $\rightarrow 2B36 \leftarrow\!\!\!\leftarrow$ leftwards two-headed arrow from bar
- 2906 $\leftarrow\!\!\!\leftarrow$ LEFTWARDS DOUBLE ARROW FROM BAR
= maps from
 $\rightarrow 27FB \leftarrow\!\!\!\leftarrow$ long leftwards arrow from bar
- 2907 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS DOUBLE ARROW FROM BAR
= maps to
 $\rightarrow 27FC \rightarrow\!\!\!\rightarrow$ long rightwards arrow from bar
- 2908 \dagger DOWNWARDS ARROW WITH HORIZONTAL STROKE
- 2909 \ddagger UPWARDS ARROW WITH HORIZONTAL STROKE
- 290A $\uparrow\!\!\!\uparrow$ UPWARDS TRIPLE ARROW
 $\rightarrow 21D1 \uparrow\!\!\!\uparrow$ upwards double arrow
 $\rightarrow 27F0 \uparrow\!\!\!\uparrow$ upwards quadruple arrow
- 290B $\downarrow\!\!\!\downarrow$ DOWNWARDS TRIPLE ARROW
 $\rightarrow 21D3 \downarrow\!\!\!\downarrow$ downwards double arrow
 $\rightarrow 27F1 \downarrow\!\!\!\downarrow$ downwards quadruple arrow
- 290C $\leftarrow\!\!\!\leftarrow$ LEFTWARDS DOUBLE DASH ARROW
- 290D $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS DOUBLE DASH ARROW
- 290E $\leftarrow\!\!\!\leftarrow$ LEFTWARDS TRIPLE DASH ARROW
- 290F $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TRIPLE DASH ARROW
- 2910 $\rightarrow\!\!\!\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED TRIPLE DASH ARROW
 $\rightarrow 2B37 \leftarrow\!\!\!\leftarrow$ leftwards two-headed triple dash arrow
- 2911 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS ARROW WITH DOTTED STEM
 $\rightarrow 2B38 \leftarrow\!\!\!\leftarrow$ leftwards arrow with dotted stem
- 2912 \uparrow UPWARDS ARROW TO BAR
- 2913 \downarrow DOWNWARDS ARROW TO BAR
- 2914 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS ARROW WITH TAIL WITH VERTICAL STROKE
= z notation partial injection
 $\rightarrow 2B39 \leftarrow\!\!\!\leftarrow$ leftwards arrow with tail with vertical stroke
- 2915 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS ARROW WITH TAIL WITH DOUBLE VERTICAL STROKE
= z notation finite injection
 $\rightarrow 2B3A \leftarrow\!\!\!\leftarrow$ leftwards arrow with tail with double vertical stroke
- 2916 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED ARROW WITH TAIL
= bijective mapping
= z notation bijection
 $\rightarrow 2B3B \leftarrow\!\!\!\leftarrow$ leftwards two-headed arrow with tail

- 2917 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED ARROW WITH TAIL WITH VERTICAL STROKE
= z notation surjective injection
 $\rightarrow 2B3C \leftarrow\!\!\!\leftarrow$ leftwards two-headed arrow with tail with vertical stroke
- 2918 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS TWO-HEADED ARROW WITH TAIL WITH DOUBLE VERTICAL STROKE
= z notation finite surjective injection
 $\rightarrow 2B3D \leftarrow\!\!\!\leftarrow$ leftwards two-headed arrow with tail with double vertical stroke

Arrow tails

- 2919 \leftarrow LEFTWARDS ARROW-TAIL
- 291A \rightarrow RIGHTWARDS ARROW-TAIL
- 291B $\leftarrow\!\!\!\leftarrow$ LEFTWARDS DOUBLE ARROW-TAIL
- 291C $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS DOUBLE ARROW-TAIL

Miscellaneous arrows

- 291D \leftarrow LEFTWARDS ARROW TO BLACK DIAMOND
- 291E \rightarrow RIGHTWARDS ARROW TO BLACK DIAMOND
- 291F $\leftarrow\!\!\!\leftarrow$ LEFTWARDS ARROW FROM BAR TO BLACK DIAMOND
- 2920 $\rightarrow\!\!\!\rightarrow$ RIGHTWARDS ARROW FROM BAR TO BLACK DIAMOND
- 2921 \nwarrow NORTH WEST AND SOUTH EAST ARROW
- 2922 \nearrow NORTH EAST AND SOUTH WEST ARROW
- 2923 \swarrow NORTH WEST ARROW WITH HOOK
- 2924 \nearrow NORTH EAST ARROW WITH HOOK
- 2925 \searrow SOUTH EAST ARROW WITH HOOK
- 2926 \swarrow SOUTH WEST ARROW WITH HOOK

Crossing arrows for knot theory

- 2927 \times NORTH WEST ARROW AND NORTH EAST ARROW
- 2928 \times NORTH EAST ARROW AND SOUTH EAST ARROW
- 2929 \times SOUTH EAST ARROW AND SOUTH WEST ARROW
- 292A \times SOUTH WEST ARROW AND NORTH WEST ARROW
- 292B \times RISING DIAGONAL CROSSING FALLING DIAGONAL
- 292C \times FALLING DIAGONAL CROSSING RISING DIAGONAL
 $\rightarrow 26CC \times$ crossing lanes
- 292D \times SOUTH EAST ARROW CROSSING NORTH EAST ARROW
- 292E \times NORTH EAST ARROW CROSSING SOUTH EAST ARROW
- 292F \times FALLING DIAGONAL CROSSING NORTH EAST ARROW
- 2930 \times RISING DIAGONAL CROSSING SOUTH EAST ARROW
- 2931 \times NORTH EAST ARROW CROSSING NORTH WEST ARROW
- 2932 \times NORTH WEST ARROW CROSSING NORTH EAST ARROW

Miscellaneous curved arrows

- 2933 \rightsquigarrow WAVE ARROW POINTING DIRECTLY RIGHT
 $\rightarrow 219D \rightsquigarrow$ rightwards wave arrow
 $\rightarrow 2B3F \curvearrowleft$ wave arrow pointing directly left
- 2934 \curvearrowright ARROW POINTING RIGHTWARDS THEN CURVING UPWARDS
- 2935 \curvearrowleft ARROW POINTING RIGHTWARDS THEN CURVING DOWNWARDS

2936 ↘	ARROW POINTING DOWNWARDS THEN CURVING LEFTWARDS	295D ⤵	DOWNWARDS HARPOON WITH BARB RIGHT FROM BAR
2937 ↙	ARROW POINTING DOWNWARDS THEN CURVING RIGHTWARDS	295E ⤴	LEFTWARDS HARPOON WITH BARB DOWN FROM BAR
2938 ↗	RIGHT-SIDE ARC CLOCKWISE ARROW	295F ⤸	RIGHTWARDS HARPOON WITH BARB DOWN FROM BAR
2939 ↛	LEFT-SIDE ARC ANTICLOCKWISE ARROW	2960 ⤠	UPWARDS HARPOON WITH BARB LEFT FROM BAR
293A ↚	TOP ARC ANTICLOCKWISE ARROW	2961 ⤡	DOWNWARDS HARPOON WITH BARB LEFT FROM BAR
293B ↜	BOTTOM ARC ANTICLOCKWISE ARROW	Paired harpoons	
293C ↝	TOP ARC CLOCKWISE ARROW WITH MINUS	2962 ⤢	LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS HARPOON WITH BARB DOWN
293D ↞	TOP ARC ANTICLOCKWISE ARROW WITH PLUS	2963 ⤣	UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON WITH BARB RIGHT
293E ↟	LOWER RIGHT SEMICIRCULAR CLOCKWISE ARROW	2964 ⤤	RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON WITH BARB DOWN
293F ↛	LOWER LEFT SEMICIRCULAR ANTICLOCKWISE ARROW	2965 ⤥	DOWNWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON WITH BARB RIGHT
2940 ⤦	ANTICLOCKWISE CLOSED CIRCLE ARROW → 20DA ⤦ combining anticlockwise ring overlay	2966 ⤦	LEFTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON WITH BARB UP
2941 ⤧	CLOCKWISE CLOSED CIRCLE ARROW → 20D9 ⤧ combining clockwise ring overlay	2967 ⤨	LEFTWARDS HARPOON WITH BARB DOWN ABOVE RIGHTWARDS HARPOON WITH BARB DOWN
Arrows combined with operators		2968 ⤩	RIGHTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS HARPOON WITH BARB UP
2942 ⤪	RIGHTWARDS ARROW ABOVE SHORT LEFTWARDS ARROW	2969 ⤪	RIGHTWARDS HARPOON WITH BARB DOWN ABOVE LEFTWARDS HARPOON WITH BARB DOWN
2943 ⤫	LEFTWARDS ARROW ABOVE SHORT RIGHTWARDS ARROW	2970 ⤪	LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH
2944 ⤬	SHORT RIGHTWARDS ARROW ABOVE LEFTWARDS ARROW	2971 ⤪	LEFTWARDS HARPOON WITH BARB DOWN BELOW LONG DASH
2945 ⤭	RIGHTWARDS ARROW WITH PLUS BELOW	2972 ⤪	RIGHTWARDS HARPOON WITH BARB UP ABOVE LONG DASH
2946 ⤮	LEFTWARDS ARROW WITH PLUS BELOW	2973 ⤪	RIGHTWARDS HARPOON WITH BARB DOWN BELOW LONG DASH
2947 ⤯	RIGHTWARDS ARROW THROUGH X → 2B3E ⤯ leftwards arrow through x	2974 ⤪	UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON WITH BARB RIGHT
2948 ⤰	LEFT RIGHT ARROW THROUGH SMALL CIRCLE	2975 ⤪	DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON WITH BARB RIGHT
2949 ⤱	UPWARDS TWO-HEADED ARROW FROM SMALL CIRCLE	Miscellaneous arrow	
Double-barbed harpoons		2976 ⤪	RIGHT DOUBLE ARROW WITH ROUNDED HEAD → 2283 ⤪ superset of
294A ↖	LEFT BARB UP RIGHT BARB DOWN HARPOON	2977 ⤪	EQUALS SIGN ABOVE RIGHTWARDS ARROW → 2B40 ⤪ equals sign above leftwards arrow
294B ↖	LEFT BARB DOWN RIGHT BARB UP HARPOON	2978 ⤪	TILDE OPERATOR ABOVE RIGHTWARDS ARROW → 2B41 ⤪ reverse tilde operator above leftwards arrow
294C ⤪	UP BARB RIGHT DOWN BARB LEFT HARPOON	2979 ⤪	LEFTWARDS ARROW ABOVE TILDE OPERATOR → 2B4C ⤪ rightwards arrow above reverse tilde operator
294D ⤪	UP BARB LEFT DOWN BARB RIGHT HARPOON	2980 ⤪	RIGHTWARDS ARROW ABOVE TILDE OPERATOR → 2B4B ⤪ leftwards arrow above reverse tilde operator
294E ↖	LEFT BARB UP RIGHT BARB UP HARPOON	2981 ⤪	RIGHTWARDS ARROW ABOVE ALMOST EQUAL TO → 2B42 ⤪ leftwards arrow above reverse almost equal to
294F ⤪	UP BARB RIGHT DOWN BARB RIGHT HARPOON		
2950 ↖	LEFT BARB DOWN RIGHT BARB DOWN HARPOON		
2951 ⤪	UP BARB LEFT DOWN BARB LEFT HARPOON		
Modified harpoons			
2952 ⤪	LEFTWARDS HARPOON WITH BARB UP TO BAR		
2953 ⤪	RIGHTWARDS HARPOON WITH BARB UP TO BAR		
2954 ⤤	UPWARDS HARPOON WITH BARB RIGHT TO BAR		
2955 ⤥	DOWNWARDS HARPOON WITH BARB RIGHT TO BAR		
2956 ⤪	LEFTWARDS HARPOON WITH BARB DOWN TO BAR		
2957 ⤪	RIGHTWARDS HARPOON WITH BARB DOWN TO BAR		
2958 ⤤	UPWARDS HARPOON WITH BARB LEFT TO BAR		
2959 ⤥	DOWNWARDS HARPOON WITH BARB LEFT TO BAR		
295A ⤪	LEFTWARDS HARPOON WITH BARB UP FROM BAR		
295B ⤪	RIGHTWARDS HARPOON WITH BARB UP FROM BAR		
295C ⤥	UPWARDS HARPOON WITH BARB RIGHT FROM BAR		

- 2976 \lessdot LESS-THAN ABOVE LEFTWARDS ARROW
2977 \lldot LEFTWARDS ARROW THROUGH LESS-THAN
→ 2B43 \gg rightwards arrow through greater-than
2978 \gtrdot GREATER-THAN ABOVE RIGHTWARDS ARROW
2979 \lhdsubset SUBSET ABOVE RIGHTWARDS ARROW
297A \lhdin LEFTWARDS ARROW THROUGH SUBSET
→ 2B44 \rightrightarrows rightwards arrow through superset
297B \lhdsupset SUPERSET ABOVE LEFTWARDS ARROW

Fish tails

- 297C \leftarrowtail LEFT FISH TAIL
297D \rightarrowtail RIGHT FISH TAIL
297E \uparrowtail UP FISH TAIL
297F \downarrowtail DOWN FISH TAIL