

Number Keypad

Operation	Keystroke	Function	Note																			
PEL Number Keypad Handling	The PEL system implements a numlock and non-numlock mode that works when Emacs operates in Graphics mode and also in Terminal (TTY) mode, despite different key behaviour. The key bindings in non-numlock mode provide access to useful keys for navigation and copy and paste operations.																					
Key behaviour when Number Keypad is not num-locked See also: ⌘ Navigation 	<div>Not Numlocked</div> <table> <tr> <td>pel-toggle-mac-numlock</td><td>=</td><td>/</td><td>*</td></tr> <tr> <td>pel-home</td><td>forward-line -1</td><td>pel-scroll-down</td><td>pel-kill-or-delete-marked-or-whole-line</td></tr> <tr> <td>left-char</td><td>recenter-top-bottom</td><td>right-char</td><td>pel-copy-marked-or-whole-line</td></tr> <tr> <td>pel-end</td><td>forward-line</td><td>pel-scroll-up</td><td rowspan="2"><enter></td></tr> <tr> <td colspan="2">yank</td><td>delete-char</td></tr> </table>		pel-toggle-mac-numlock	=	/	*	pel-home	forward-line -1	pel-scroll-down	pel-kill-or-delete-marked-or-whole-line	left-char	recenter-top-bottom	right-char	pel-copy-marked-or-whole-line	pel-end	forward-line	pel-scroll-up	<enter>	yank		delete-char	With PEL, right after pel-init is called, the number keypad is placed in non num-lock mode and 14 of the 18 keys take the special meaning described in the picture to the left. <ul style="list-style-type: none"> In graphics mode the top-left-most key is bound to pel-toggle-mac-numlock to switch the keypad numlock mode on or off. <ul style="list-style-type: none"> ⚠ This key, however, is not bound when Emacs operates in terminal (TTY) mode. To toggle numlock in terminal mode (or also in graphics mode) use the <f11> # key sequence. Four keys implement cursor functionality according to the normal cursor position. <ul style="list-style-type: none"> The pel-home and pel-end commands are available in the left column. The center key, the 5 key, is bound to recenter-top-bottom. The pel-scroll-down & pel-scroll-up are available in the right column. The big “0” key is mapped to yank The “.” key is bound to delete-char. The “-” key is pel-kill-delete-marked-or-whole-line The “+”key is pel-copy-marked-or-whole-line
pel-toggle-mac-numlock	=	/	*																			
pel-home	forward-line -1	pel-scroll-down	pel-kill-or-delete-marked-or-whole-line																			
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Key behaviour when Number Keypad is num-locked	<div>Numlocked</div> <table> <tr> <td>pel-toggle-mac-numlock</td><td>=</td><td>/</td><td>*</td></tr> <tr> <td>7</td><td>8</td><td>9</td><td>-</td></tr> <tr> <td>4</td><td>5</td><td>6</td><td>+</td></tr> <tr> <td>1</td><td>2</td><td>3</td><td rowspan="2"><enter></td></tr> <tr> <td colspan="2">0</td><td>.</td></tr> </table>		pel-toggle-mac-numlock	=	/	*	7	8	9	-	4	5	6	+	1	2	3	<enter>	0		.	When PEL numlock mode is activated, the behaviour of the keys never to their default meaning. Note that PEL activates non-numlock mode by default: to activate the numlock mode you can use the <f11> # key sequence or press the top-left-most key (in graphics mode only): this executes pel-toggle-mac-numlock.
pel-toggle-mac-numlock	=	/	*																			
7	8	9	-																			
4	5	6	+																			
1	2	3	<enter>																			
0		.																				
Toggle PEL Keypad Numlock mode	<ul style="list-style-type: none"> <f11> # <clear> 	(pel-toggle-mac-numlock)	Toggle PEL numlock mode. ❖ With PC computers the top-left-most key is an explicit num-lock key.																			
Show PEL Numlock Mode state	<f11> ? k #	(pel-show-mac-numlock)	Display state of PEL Keypad num-lock mode.																			
PEL Copy Keypad Keys	The “+” keypad key can also be used for copy operation. The first of the 3 binding only works when PEL is in non numlock mode, but the other 2 bindings use modifier keys and the commands are bound regardless of the PEL numlock mode.																					
Copy region or line at point ★PEL Enhanced Key ★ Available in PEL non numlock mode See also: ⌘ Cut & Paste 	<ul style="list-style-type: none"> M-w <f11> = 1 <f11> + <kp-separator> 	(pel-copy-marked-or-whole-line)	Flexible copy to kill ring.: copy visible region if any, otherwise copy current line to kill ring. The copy operation is controlled by the (optional) argument: <ul style="list-style-type: none"> If N = 0: copy region (regardless of whether it is visible or not. If a region is active/visible: copy the region's text. if no region is active/visible copy N lines: <ul style="list-style-type: none"> If no argument, (N=1) copy current line. If N > 0: copy current line and N-1 following lines. If l < 0: copy current line and N-1 previous lines. All copied lines are complete. The copied text is saved in the kill-ring. All copy operations are performed by ‘ kill-ring-save ’ (the original binding for that key). ➡ Replaces standard binding to kill-ring-save which only copies region. ➡ In graphics mode: text is also copied to the OS clipboard. ➡ In terminal (TTY) mode the keypad + key is interpreted as <kp-separator> on macOS so this key is bound to the command (in non numlock mode)																			
Copy complete word at point See also: <ul style="list-style-type: none"> ⌘ Cut & Paste ⌘ Text Modes 	<ul style="list-style-type: none"> <f11> = w <C-kp-add> 	(pel-copy-word-at-point)	Copy word at point. <ul style="list-style-type: none"> Shows the text copied in the echo area. 🙋 See table ⌘ Text Modes for information on text modes that affects this. <ul style="list-style-type: none"> The <f11> t m ? command displays the mode and the <f11> t m prefix allows modifications of the mode. See changing the word mode to include or exclude some characters as word delimiters: <ul style="list-style-type: none"> subword-mode . To toggle that mode: <f11> t m b superword-mode . To toggle that mode: <f11> t m p 																			
Copy complete symbol at point See also: ⌘ Cut & Paste 	<ul style="list-style-type: none"> <f11> = . M-+ <M-kp-add> 	(pel-copy-symbol-at-point)	Copy symbol at point. Syntax depends on the syntax table for the buffer. <ul style="list-style-type: none"> Shows the text copied in the echo area. 🙋 The syntax of the symbol depends on the major mode used by the current buffer.																			

Operation	Keystroke	Function	Note																		
PEL Kill Keypad Keys	The “-” keypad key can also be used for kill operation. The binding only works when PEL is in non numlock mode.																				
Kill/Delete marked region/line(s)	<ul style="list-style-type: none">• C–w• <f11> – 1• <kp– subtract>• ⌘–x	(pel-kill-or-delete-marked-or-whole-line &optional N)	<div>Flexible region/whole-line kill/delete.</div> <ul style="list-style-type: none">• N=0 := kill region (active/visible or not)• Sign of N selects operation:<ul style="list-style-type: none">• positive := kill (default)• negative := delete• Select text to delete/kill based on presence of region:<ul style="list-style-type: none">• if a region is marked: kill/delete region's text,• if no region: kill/delete abs(N) lines, start at point.• If operation is to kill 1 line and the line is empty, then delete line instead of killing it.• Scenarios:<ul style="list-style-type: none">• With no arg:<ul style="list-style-type: none">• with no active/visible region: kill current line, but if line is empty delete it.• with an active/visible region: kill region's text.• With arg 0: (M–0 C–w) : kill region's text, whether region is active/visible or not.• With a non zero arg:<ul style="list-style-type: none">• With no region active/visible:<ul style="list-style-type: none">• With arg - : (M– – C–w) or (C– – C–w) : delete current line• With arg - 1 : (M– – 1 C–w) or (C– – 1 C–w) : delete current line• With arg 4: (M – 4 C–w) : kill 4 lines including current one.• With arg -3: (M– – 3 C–w) : delete 3 lines including current one.• With a region active/visible:<ul style="list-style-type: none">• With any negative mark argument: delete the region's text.• With no argument or any positive argument: kill the region's text. <div>✂ This replaces the standard Emacs binding to kill-region which always kill text between mark and point, even when the region is not marked. When text is killed it is killed with kill-region, so it retains the filtering and kill ring text appending capabilities.</div> <div>👉 In graphics mode this also copies text to the OS clipboard.</div> <div>👉 With PEL in non-numlock mode, the “-” key on the number keypad is bound to this command.</div> <div>🍏 On macOS in graphics mode only: PEL rebinds ⌘–x from (kill-region) to this command, making this easy to use key able to perform more.</div>																		
Implementation Notes 🍏	On macOS keyboards with number keypads, the keys available when Emacs runs in graphics mode differ from the keys available when Emacs runs in terminal mode.																				
	<div>🍏 “Emacs -Q” Keypad in Graphics mode</div> <table><tr><td><clear></td><td>=</td><td><kp–divide></td><td><kp–multiply></td></tr><tr><td><kp–7></td><td><kp–8></td><td><kp–9></td><td><kp–subtract></td></tr><tr><td><kp–4></td><td><kp–5></td><td><kp–6></td><td><kp–add></td></tr><tr><td><kp–1></td><td><kp–2></td><td><kp–3></td><td rowspan="2"><kp–enter></td></tr><tr><td colspan="2"><kp–0></td><td><kp–decimal></td></tr></table>	<clear>	=	<kp–divide>	<kp–multiply>	<kp–7>	<kp–8>	<kp–9>	<kp–subtract>	<kp–4>	<kp–5>	<kp–6>	<kp–add>	<kp–1>	<kp–2>	<kp–3>	<kp–enter>	<kp–0>		<kp–decimal>	When Emacs is running in graphical mode, the <clear> key is available and the number keys are distinguishable from the self-insert digits. The keys on the right-most row are also distinguishable and so is the key labelled <kp-decimal>.
<clear>	=	<kp–divide>	<kp–multiply>																		
<kp–7>	<kp–8>	<kp–9>	<kp–subtract>																		
<kp–4>	<kp–5>	<kp–6>	<kp–add>																		
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<kp–0>		<kp–decimal>																			
	<div>🍏 “Emacs -Q” Keypad in Terminal.app TTY mode</div> <table><tr><td></td><td>=</td><td>/</td><td>*</td></tr><tr><td><kp–7></td><td><kp–8></td><td><kp–9></td><td><kp–subtract> –</td></tr><tr><td><kp–4></td><td><kp–5></td><td><kp–6></td><td><kp–separator> +</td></tr><tr><td><kp–1></td><td><kp–2></td><td><kp–3></td><td rowspan="2">RET</td></tr><tr><td colspan="2"><kp–0></td><td>M–0 n</td></tr></table>		=	/	*	<kp–7>	<kp–8>	<kp–9>	<kp–subtract> –	<kp–4>	<kp–5>	<kp–6>	<kp–separator> +	<kp–1>	<kp–2>	<kp–3>	RET	<kp–0>		M–0 n	<div>When Emacs is running in terminal (TTY) mode,</div> <ul style="list-style-type: none">• The <clear> key is not detectable.• The +, / and * keys only register as self-insert. The digit keys register as self-insert digits but if we bind the corresponding <kp-digit> key Emacs is able to handle it properly.• On the right-most row the <kp-subtract> is detectable, but the key below is detected as <kp-separator> instead of the normal <kp-add>.• Also, the <kp-decimal> is not detected, instead Emcas detects the key sequence M–0 n. <div>🚧🚧🚧⚠ Under some circumstances, still with unknown trigger, I have seen that Emacs looses the ability to detect <kp-subtract> and <kp-separator> in terminal mode. It could be a bug in PEL, in macOS or just some trigger I have not yet identified.</div>
	=	/	*																		
<kp–7>	<kp–8>	<kp–9>	<kp–subtract> –																		
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