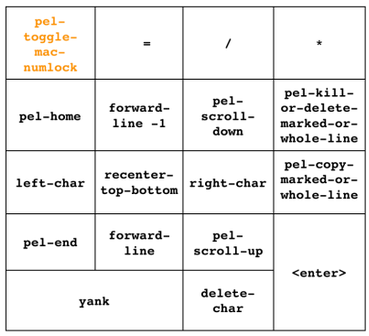
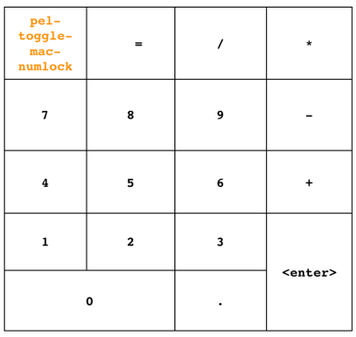
Number Keypad

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)	**Not Numlocked** 		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. • In graphics mode the top-left-most key is bound to pel-toggle-mac-numlock to switch the keypad numlock mode on or off. • ⚠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. • 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
Key behaviour when Number Keypad is num-locked	**Numlocked** 		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.
Toggle PEL Keypad Numlock mode	• **<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)
	• **M-w**
	• **<f11> = l**
	• **<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:
			• 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:
			  • If no argument, (N=1) copy current line.
			  • If N > 0: copy current line and N-1 following lines.
			  • If I < 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: ∑ Cut & Paste, ∑ Text Modes)
	• **<f11> = w**
	• **<C-kp-add>**
		(**pel-copy-word-at-point**)	Copy word at point.
			• Shows the text copied in the echo area.
			☝ See table ∑ Text Modes for information on text modes that affects this.
			• 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:
			  • 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)	• **<f11> = .** • **M-+** • **<M-kp-add>**	(**pel-copy-symbol-at-point**)	Copy symbol at point. Syntax depends on the syntax table for the buffer. • Shows the text copied in the echo area. ☝ The syntax of the symbol depends on the major mode used by the current buffer.
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.		

<table>
<tr><th>Operation</th><th>Keystroke</th><th>Function</th><th>Note</th></tr>
<tr><td>Kill/Delete marked region/line(s)

★PEL Enhanced Key ★

Available in PEL non numlock mode

(See also: ∑ Cut & Paste)</td><td>• C-w
• <f11> - 1
• <kp-subtract>
• ⌘-x</td><td>(pel-kill-or-delete-marked-or-whole-line
&optional N)</td><td>Flexible region/whole-line kill/delete.
• N=0 := kill region (active/visible or not)
• Sign of N selects operation:
  • positive := kill (default)
  • negative := delete
• Select text to delete/kill based on presence of region:
  • 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:
  • With no arg:
  • 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:
  • With no region active/visible:
  • 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:
  • With any negative mark argument: delete the region's text.
  • With no argument or any positive argument: kill the region's text.

✂ 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.

☝ In graphics mode this also copies text to the OS clipboard.

☝ With PEL in non-numlock mode, the "-" key on the number keypad is bound to this command.
 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.</td></tr>
<tr><td>Implementation Notes </td><td colspan="3">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.</td></tr>
<tr><td></td><td> "Emacs -Q" Keypad in Graphics mode
<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></td><td>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>.</td></tr>
<tr><td></td><td> "Emacs -Q" Keypad in Terminal.app TTY mode
<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-O n</td></tr></table></td><td>When Emacs is running in terminal (TTY) mode,
• 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-O n.

🚧⚠ 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.</td></tr>
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