Kernel compile		
Download	Download kernel source code `linux-X.Y.Z.tar.bz2` from `http://www.kernel.org` to the base of the kernel source tree `/usr/src/linux`	
Clean	`make clean`	Delete most generated files
	`make mrproper`	Delete all generated files and kernel configuration
	`make distclean`	Delete temporary files, patch leftover files, and similar
Configure	`make config`	Terminal-based (options must be set in sequence)
	`make menuconfig`	ncurses UI
	`make xconfig` `make gconfig`	GUI
	`make oldconfig`	Create a new config file, based on the options in the old config file and in the source code
	Components (e.g. device drivers) can be either: - not compiled - compiled into the kernel binary, for support of devices always used on the system or necessary for the system to boot - compiled as a kernel module, for optional devices The configuration command creates a `/usr/src/linux/.config` config file containing instructions for the compile	
Build	`make bzImage`	Compile the kernel
	`make modules`	Compile the kernel modules
	`make all`	Compile kernel and kernel modules
	`make -j2 all` will speed up compilation by allocating 2 simultaneous compile jobs	
Modules install	`make modules_install`	Install the previously built modules present in `/lib/modules/X.Y.Z`
Kernel install	`make install`	Install the kernel automatically
	To install the kernel by hand: Copy the new compiled kernel and other files into the boot partition `cp /usr/src/linux/arch/boot/bzImage /boot/vmlinuz-X.Y.Z` (kernel) `cp /usr/src/linux/arch/boot/System.map-X.Y.Z /boot` `cp /usr/src/linux/arch/boot/config-X.Y.Z /boot` (config options used for this compile) Create an entry in GRUB to boot on the new kernel	
Package	Optionally, the kernel can be packaged for install on other machines	
	`make rpm-pkg`	Build source and binary RPM packages
	`make binrpm-pkg`	Build binary RPM package
	`make deb-pkg`	Builds binary DEB package

Kernel patching		
Download	Download and decompress the patch to `/usr/src`	
Patch	`patch -p1 < file.patch`	Apply the patch
	`patch -Rp1 < file.patch`	To remove a patch, you can either apply the patch again or use this command (reverse patch)
Build	Build the patched kernel as explained previously	
Install	Install the patched kernel as explained previously	