# Mini Test 1    Ryan Rosak
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1. In sum.sh

2. Static libraries are .a archive files. Static libraries code is compiled but not linked. When we link static library code, it is pasted in each file that it is included but a copy of the file is not needed. The code is connected at compile time and has no run time costs. Shared objects/libraries reduce the amount of code that is duplicated. There is less bloat in memory but there is a run time cost. Only one copy is needed to be run and used in memory.

3.

grep Smith student.txt | sort -k 4,4 > Smith.txt

4. ls -l | less <=> ls -l > less

The first command gets a list of files in the cwd using long listing format. This output is piped to the less command which will display the output in a structured way that fits to the console and

can be scrolled through. The second command gets a list of files in the cmd using long listing format. This output is redirected and written into a file that is replaced and created called less.

5. You must use chmod to make the file executable for all and you must include the location of your shell interpreter at the top of the file. (e.g !/bin/bash)

6. 1. variable
   2. You are my sunshine!
   3. $variable
   4. $variable
   5. $You are my sunshine!

7. In factorial.sh

8. In triangle.sh