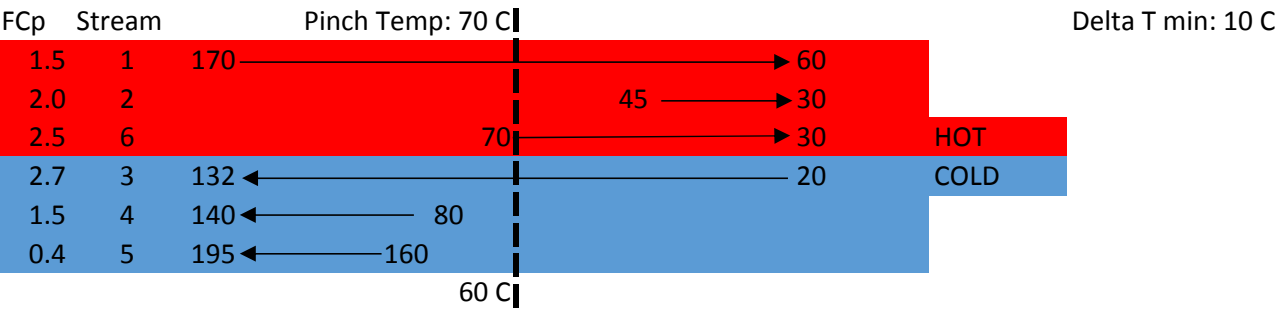
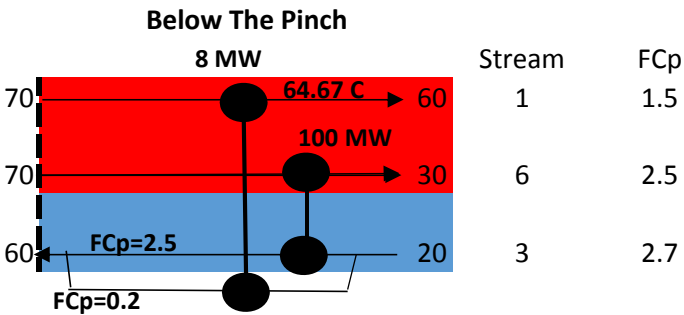
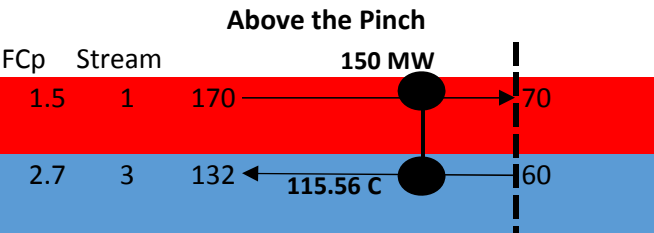


HW 4 Problem 1

We first need to construct a chart showing our streams and their temperatures.



Now we must make pinch matches

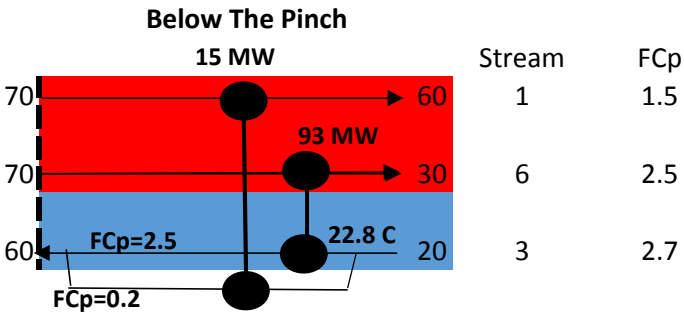


You can only match stream 1 with stream 3

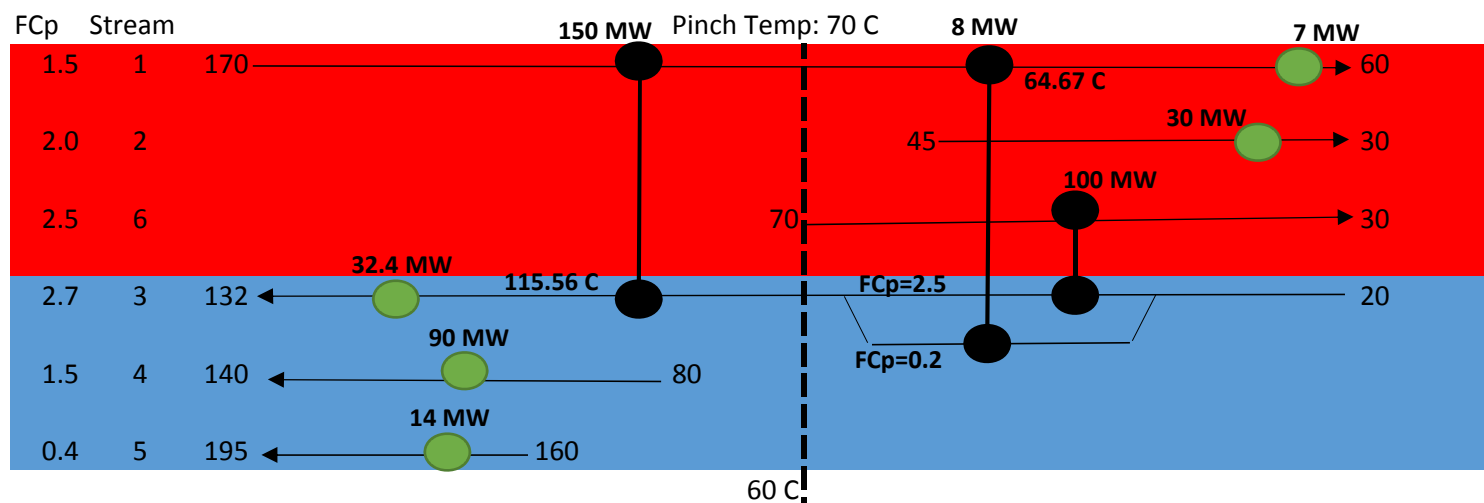
You first must split stream 3 to satisfy the rule:  $FCp_c \leq FCp_h$ . I choose to split it between 2.5 and 0.2 because when  $FCp=2.5$  is matched with stream 6, you can fully cool stream 6 without utilities. Next we can match  $FCp=0.2$  with stream 1.

Remember  $FCp_h \leq FCp_c$   
all hot streams need to participate

Other Possibilities



This option would require 2 utilities instead of one and would be suboptimal



Remember there are many different ways to choose how you split you streams, so it may come out different than this solution, but as long as you follow the rules shown, your answer will be just as correct.

No combination of matches is particularly "right".  
You must do an economic analysis to see which one  
would cost the least and use the least resources.