A program has 10% divide instructions. All non-divide instructions take one cycle. All divide instructions take 50 cycles.

a. What is the CPI of this program on this processor?

b. What percent of time is spent just doing divides?

c. What would the speedup be if we sped up divide by 2x?

d. What would the speedup be if we sped up divide by 50x?

e. What would the speedup be if divide instructions were infinitely fast (zero cycles)?