3)

Total time = 250 s

70 seconds = f_p (Floating point)
85 seconds = L/S (Load/store)
40 seconds = Branch = 195 seconds

The remaining 55 seconds must be consumed by INT

a) T_{fp} = 70 × 0.8 = 56 seconds
T_{new} = 56 + 85 + 55 + 40 = 236 seconds
It will be reduced by 5.6%.

b) T_{new} = 250 × 0.8 = 200 seconds
T_{fp} + $T_{L/s}$ + T_{Branch} = 165 seconds
T_{int} = 35 seconds
The Reduction time is INT = 58.8%.

c) T_{new} = 250 × 0.8 = 200 seconds
T_{fp} + T_{int} + $T_{L/s}$ = 210 seconds

It's not possible to achieve this reduction through reducing solely branch instructions.