

2.15 $\text{MIPS} = \frac{\text{Clock rate}}{\text{CPI} \times 10^6}$. Let's find the CPI for MFP first:

$\text{CPI for MFP} = 0.1 \times 6 + 0.15 \times 4 + 0.05 \times 20 \times 0.7 \times 2 = 3.6$; of course, the CPI for MNFP is simply 2. So $\text{MIPS for MFP} = \frac{1000}{\text{CPI}} = 278$ and

$\text{MIPS for MNFP} = \frac{1000}{\text{CPI}} = 500$.

2.16

Instruction class	Frequency on MFP	Count on MFP in millions	Count on MNFP in millions
Floating point multiply	10%	30	900
Floating point add	15%	45	900
Floating point divide	5%	15	750
Integer instructions	70%	210	210
Totals	100%	300	2760