Q1. A program consists of 5000 floating point instructions and 25000 integer instructions. Processor A has a clock rate of 2.0 GHz. Floating point instructions take 7 cycles and integer instructions take 1 cycle. How long does it take to run the program?

Ans: 30 μs

Q2. What is the average CPI for this processor for the given program?

Ans: 2 cycle/instructions

Q3. Processor A runs Program 2 consisting of 100,000 floating point instructions and 50,000 integer instructions. What is the average CPI for this program?

Ans: 5 cycle/instructions

Q4. Processor B has an average CPI for Program 2 of 3.5. Its clock rate is 1.8 GHz. How much time does it take to execute the program?

Ans: 292 μs

Q5. Which processor is faster and by how much?

Ans: B, 1.29