

Numbers and Operations: Manufacturing Manager

Micron Technology, Inc.

Job Description: Manage an engineering and manufacturing group that designs and manufactures PC motherboards.

Problem:

An FCT (Functional Circuit Tester) takes 6 minutes to test a board. In a month, 30,000 boards need to be tested.

How many testers are needed if the testing personnel work 20 hours a day and 22 days per month.

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Solution:

$$22 \text{ days/month} \times 20 \text{ hrs/day} = 440 \text{ hours/month}$$

$$60 \text{ min/hr} \div 6 \text{ min/board} = 10 \text{ boards/hr by each tester}$$

$$10 \text{ boards/hr} \times 440 \text{ hrs/month} = 4,400 \text{ boards/month by each tester}$$

$$30,000 \text{ boards} \div 4,400 \text{ boards/tester} = 6.8 \text{ testers or } 7 \text{ testers needed}$$