

Production: Juice bottling requires 3 processes: Sterilizing, Filling, and Labeling the bottles. Each case of orange juice requires 9 minutes of sterilizing, 6 minutes for filling and 1 minute for labeling. Each case of grapefruit juice requires 10 minutes of sterilizing, 4 minutes for filling and 2 minutes for labeling. Each case of tomato juice requires 12 minutes of sterilizing, 4 minutes for filling and 1 minute for labeling. Given that the sterilizer ran for 398 minutes, the filling machine ran for 164 minutes, and the labeling machine ran for 58 minutes, how many cases of each type of juice were made?

Your idiotic teacher made two typos in the following demo problem. I've boxed 'em and made the corrections in red. The problem should work out cleanly, now.

Production: To paint a car requires painting, drying and polishing. There are machines to do each job. The Epsilon company manufactures 3 kinds of cars: The Delta, the Beta and the Sigma. Each Delta requires 10 hours (hr) for painting, 1 hr for drying and 2 hours for polishing. Each Beta requires 16 hours for painting, 2 hours for drying, and 3 hour for polishing. A Sigma requires 8 hours for painting, 1 hr for drying and 1 hr for polishing. If the company used 240 hr for painting, 28 hr for drying and 41 hr for polishing, how many of each type of car were produced?