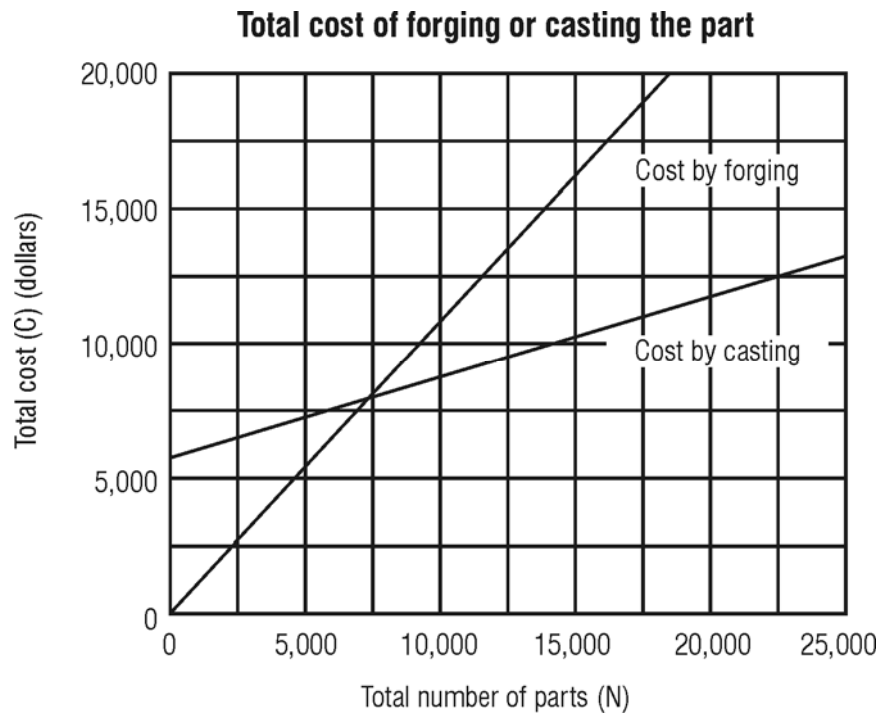
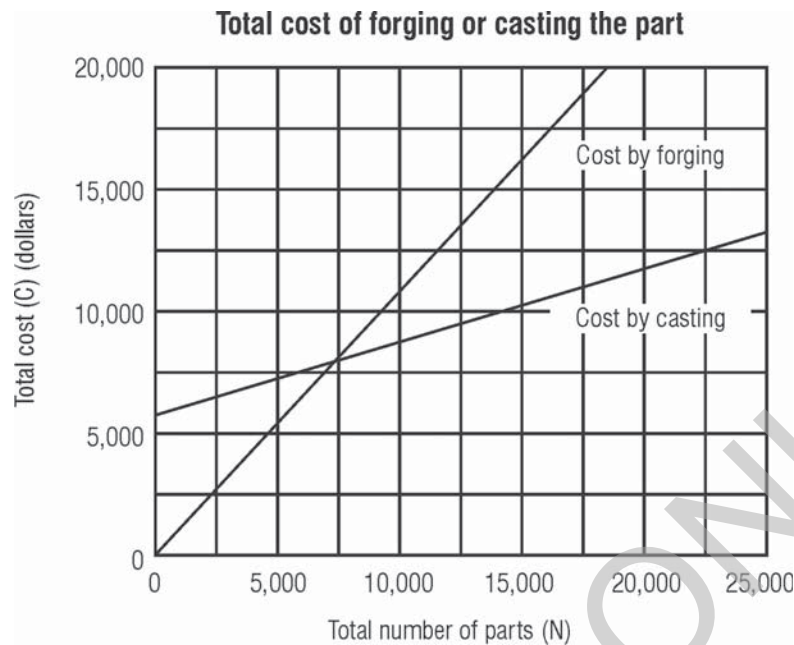


October 19, 2009

In a recent review of the OP-TEC *Mathematics for Photonics Education* text, an error was discovered. On page 78, a graph is presented showing the difference in the number of parts that can be produced by forging and casting. This graph is missing the lines needed to answer the exercise. The graph provided below contains these lines. A complete replacement page follows.





- For an order of 15,000 parts, what is the cost of producing the part by casting? By forging?
- For an order of 5000 parts, what is the cost of producing the part by casting? By forging?
- At what size order, the breakpoint, are the cost of forging and the cost of casting the same?
- Can the “breakpoint” determined above be used as a guideline for the production staff? What would that guideline be?

Exercise 4

Traveling at 50 miles per hour, you record the mileage on your odometer every 30 minutes, as shown below.

Time (min)	Distance traveled (mi)
0	0
30	25
60	50
90	75
120	100

- Draw and label the axes for your graph. Use the labels and title in the table above to help you label the axes. Put the driving time along the x -axis (0, 30, 60, 90, and 120) and distances traveled along the y -axis (up to 100). Then plot the information from the table, using the driving time and the distance traveled. Plot each set of data given in the table and join the points on the graph with lines. Your graph should be a straight