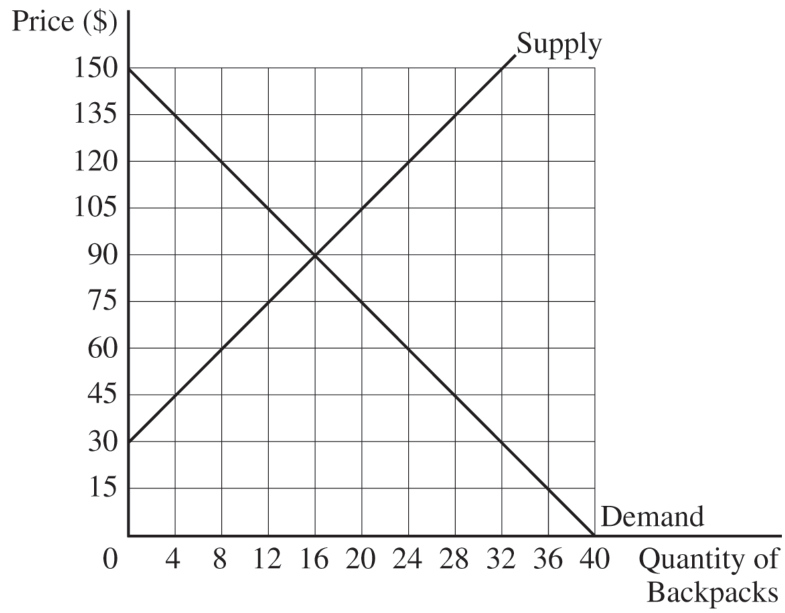
3. Backpacks are produced in a perfectly competitive market that has no externalities. The provided graph shows the market supply and demand curves for backpacks in the country of Jambo.



(a) Calculate total economic surplus at the market equilibrium. Show your work.

(b) To decrease the price of backpacks for students, the government of Jambo has decided to set a price ceiling of $60 per backpack. Compared to the market equilibrium, will the quantity of backpacks purchased increase, decrease, or not change as a result of the price ceiling? Explain.

(c) Suppose instead the government of Jambo provides a per-unit subsidy of $30 to the sellers of backpacks.

(i) Identify the price paid by consumers per backpack after the per-unit subsidy is implemented.

(ii) Calculate the total cost of the subsidy to the government. Show your work.

(iii) Does the per-unit subsidy cause deadweight loss to increase, decrease, or remain the same compared to the market equilibrium in part (a)? Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

STOP

END OF EXAM