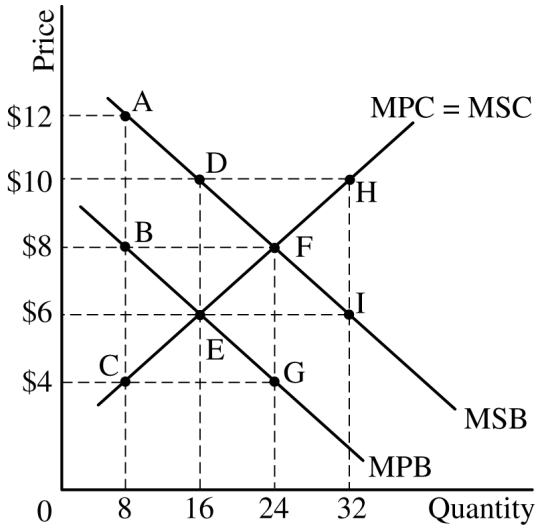
2. Modern-day word processing software gives consumers the ability to create and save documents in different file formats that can then be accessed by multiple computer operating systems. The graph below depicts a perfectly competitive market for word processing software. In the graph, MSB is the marginal social benefit, MPB is the marginal private benefit, MPC is the marginal private cost, and MSC is the marginal social cost.



(a) Identify the type of market failure illustrated by the graph. Explain.

(b) Using the numbers on the graph, identify the market equilibrium price and quantity.

(c) Using the labeling on the graph, identify the area representing the deadweight loss at the quantity identified in part (b).

(d) Suppose the government is considering granting a subsidy to correct the market failure. What is the dollar value of the per-unit subsidy that would achieve the socially optimal quantity?

(e) Suppose the government does not grant the subsidy and instead imposes a price floor at $8.

(i) How many units will consumers and producers exchange at the price floor?

(ii) Does the price floor correct the market failure? Explain.