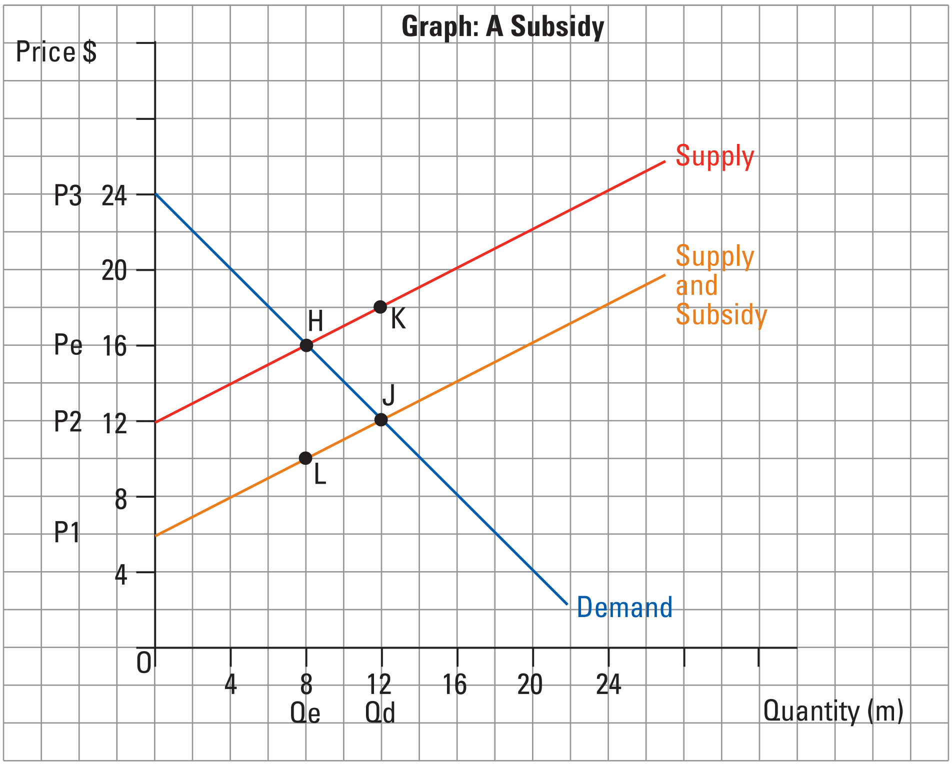
eLearneconomics: Consumer/Producer Surplus – Subsidy (1)

Student response ____________

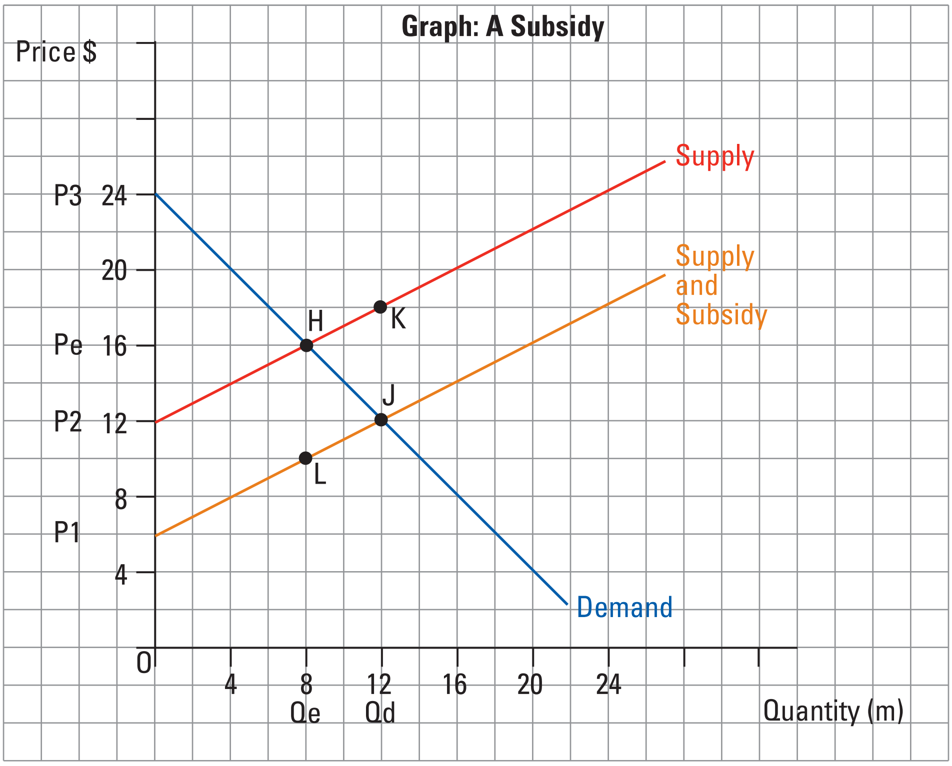
(a) Explain, using figures, the changes to consumer surplus, producer surplus and allocative efficiency as the result of the government giving a subsidy.



eLearneconomics: Consumer/Producer Surplus – Subsidy (1)

Solution

(a) Explain, using figures, the changes to consumer surplus, producer surplus and allocative efficiency as the result of the government giving a subsidy.



A subsidy is a payment by government to firms to keep their costs down, and as a result firms will increase supply. Consumer surplus (CS) is the difference between what a consumer is prepared to pay for consuming a good or service and the price actually paid. On the diagram the original consumer surplus is $32m and at the new equilibrium it is $72m, a gain of $40m. There is a gain in consumer surplus because consumers pay a lower price ($12 rather than $16) and consume more (12m rather than 8m).

Producer surplus is the difference between the total earnings of suppliers for a certain quantity sold and the total costs required to put that quantity on the market. Therefore, the value of the producer surplus is $16m because it is the area above the supply curve and below the price firms receive. The new producer surplus is $36m, a gain of $20m. There is a gain in producer surplus from the subsidy because producers receive a higher price ($18 rather than $16) and sell more (12m rather than 8m).

However, some of the subsidy of $72m is not being picked up as part of the new consumer surplus and producer surplus, therefore causing a loss to society. This loss of allocative efficiency is termed a deadweight loss (DWL), which is a loss of welfare by an individual or group that is not offset by a welfare gain to some other individual or group. In this instance it is a loss of $12m.

eLearneconomics: Consumer/Producer Surplus – Subsidy (2)

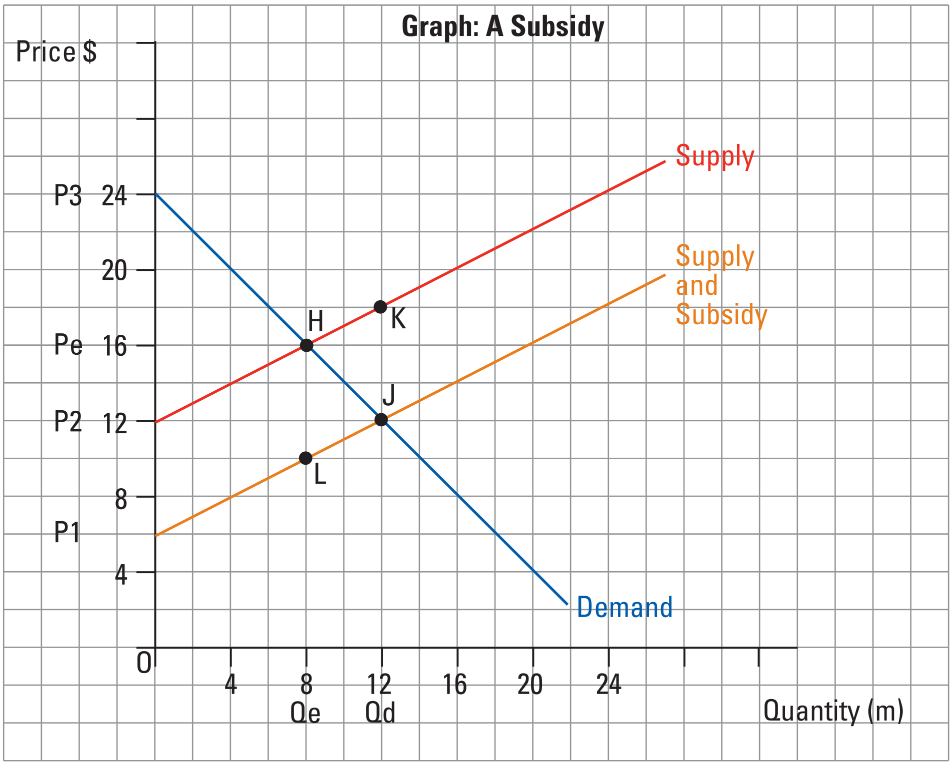
Student response ______________________________

(a) Show the effects of the government giving a subsidy on the market by:

(i) shading the gain in consumer surplus

(ii) shading the gain in producer surplus

(iii) shading any loss of allocative efficiency



(b) Complete the table.

	Labels from the graph
Original consumer surplus	
New consumer surplus	
Original producer surplus	
New producer surplus	
Deadweight loss	

eLearneconomics: Consumer/Producer Surplus – Subsidy (2a)

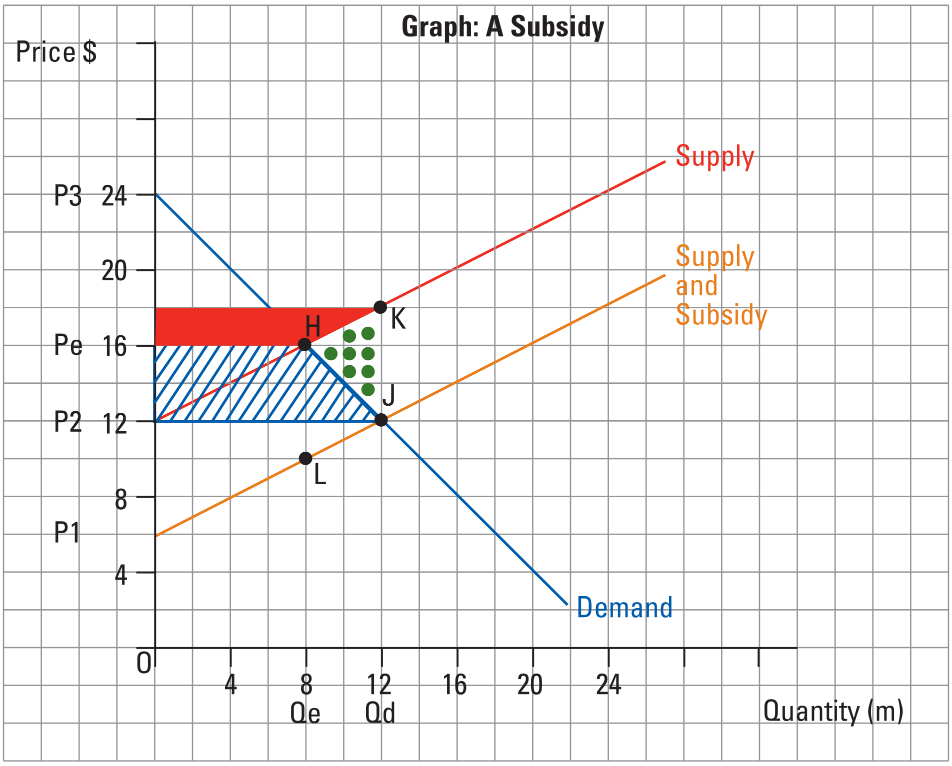
Solutions

(a) Show the effects of the government giving a subsidy on the market by:

(i) shading the gain in consumer surplus

(ii) shading the gain in producer surplus

(iii) shading any loss of allocative efficiency



(b) Complete the table.

	Labels from the graph
Original consumer surplus	Pe H P3
New consumer surplus	P2 J P3
Original producer surplus	Pe H P2
New producer surplus	P2 J P1
Deadweight loss	K H J