

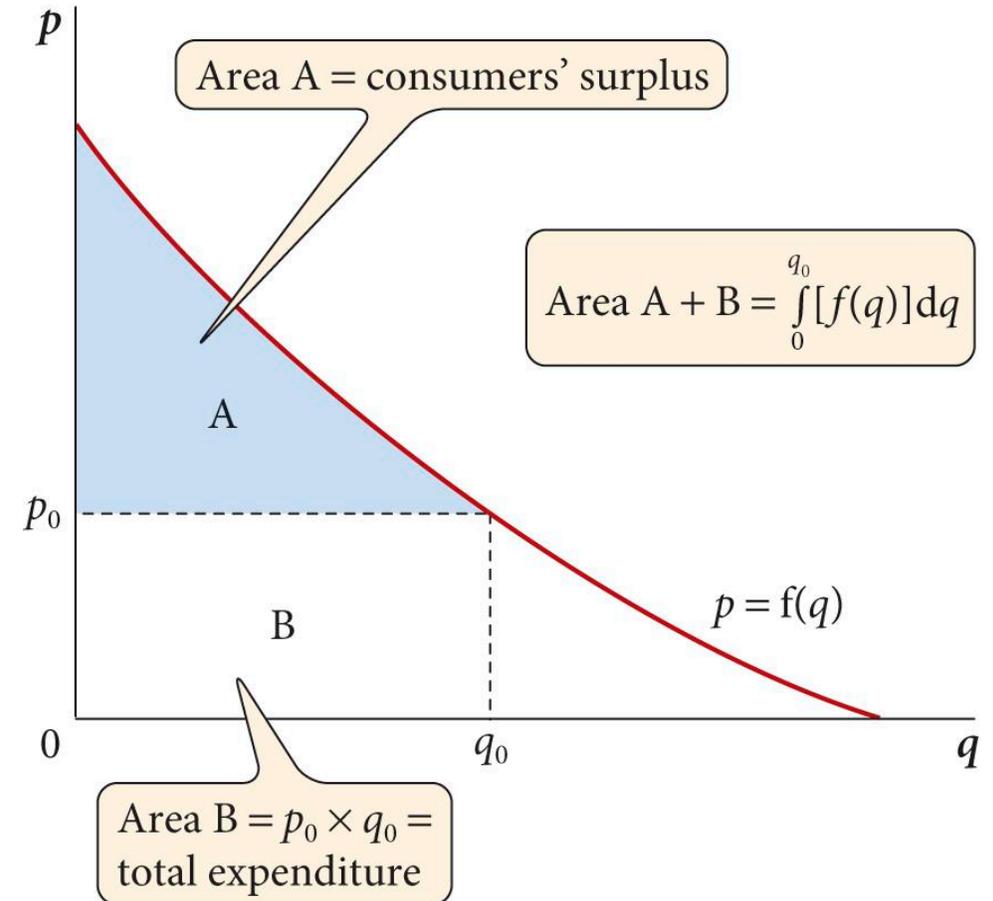
CONSUMER SURPLUS

- Consumer surplus measures the net satisfaction that consumers enjoy from consuming a specific quantity of a good at the purchase price - see Fig. 18.7
- To find CS, we need to find the area under the demand curve - using definite integration

$$CS = \int_0^{q_0} f(q) dq - p_0 q_0.$$

$f(q)$ is the inverse demand function, while $p_0 q_0$ represents total expenditure on the good.

- If you are given the demand function (i.e. $q = f(p)$), first rewrite to obtain the inverse demand function ($p = g(q)$), before obtaining integral...



PRODUCER SURPLUS

- Producer surplus measures the net benefit the producers derive from supplying quantity q_0 , at price p_0
- To find PS, we need to find the area above the supply curve - again use definite integration. See Fig. 18.8

$$PS = p_0 q_0 - \int_0^{q_0} g(q) dq.$$

- where $p_0 q_0$ is total income received by producers and $g(q)$ is the inverse supply function
- If you are given the supply function (i.e. $q = h(p)$), first find the inverse supply function ($p = g(q)$) before finding the definite integral.

