

- 17** Researchers have developed a new type of filament lamp with an efficiency of 40%. Old-type filament lamps have an efficiency of 5.0%. The two types of lamp produce the same useful output power.

What is the ratio $\frac{\text{input power to new type of lamp}}{\text{input power to old type of lamp}}$?

A 0.13

B 0.63

C 1.6

D 8.0

- 18** A student has a circuit with a filament lamp and a battery. The filament lamp is labeled 5.0 W. The student connects the circuit and the filament lamp is lit.