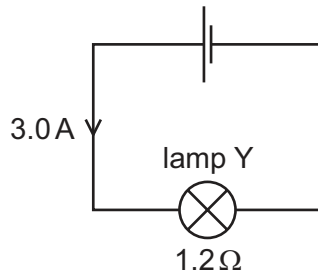
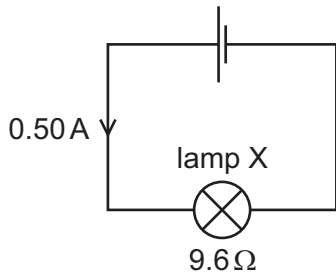


- 31** The circuit diagrams show two lamps X and Y each connected to a cell. The current in lamp X is 0.50 A and its resistance is $9.6\ \Omega$. The current in lamp Y is 3.0 A and its resistance is $1.2\ \Omega$.



What is the ratio $\frac{\text{power in lamp X}}{\text{power in lamp Y}}$?

A 0.22

B 0.75

C 1.3

D 4.5

- 32** A cylindrical piece of a soft, electrically conducting material has resistance R . It is rolled out so