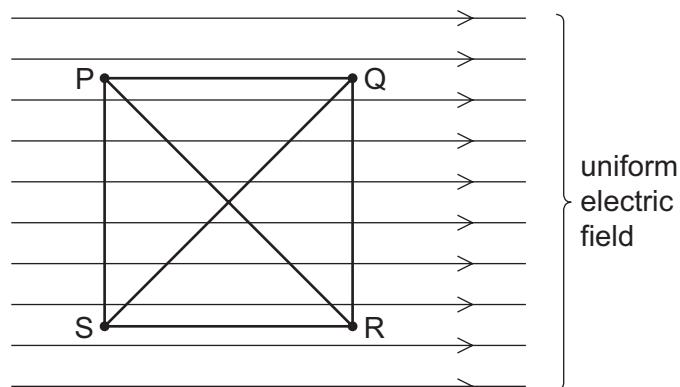


- 13 A small positive charge can move inside a uniform electric field.

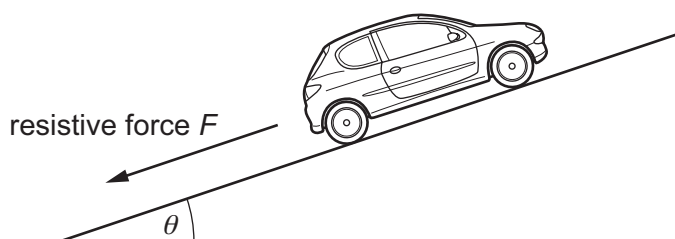


The charge moves along different straight paths between points P, Q, R and S.

Which row gives two paths that result in the same total work done on the charge?

	path 1	path 2
A	P to R	Q to S
B	P to R	P to S
C	S to Q	S to R
D	S to Q	R to P

- 14 A car of mass m travels at constant speed up a slope at an angle θ to the horizontal, as shown in the diagram. Air resistance and friction provide a resistive force F . The acceleration of free fall is g .



What is the force needed to propel the car at this constant speed?

- A** $mg \cos \theta$
- B** $mg \sin \theta$
- C** $mg \cos \theta + F$
- D** $mg \sin \theta + F$