If you use 20 J of work to push a 2-C charge into an electric field, its voltage with respect to its starting position is

a) 10 V

b) less than 10 V

c) more than 10 V

Please show your work

Answer: a) 10 V

Work which need to move charge between points with voltage U:

$$A = Uq \rightarrow U = \frac{A}{q}$$

$$U = \frac{20J}{2C} = 10V$$