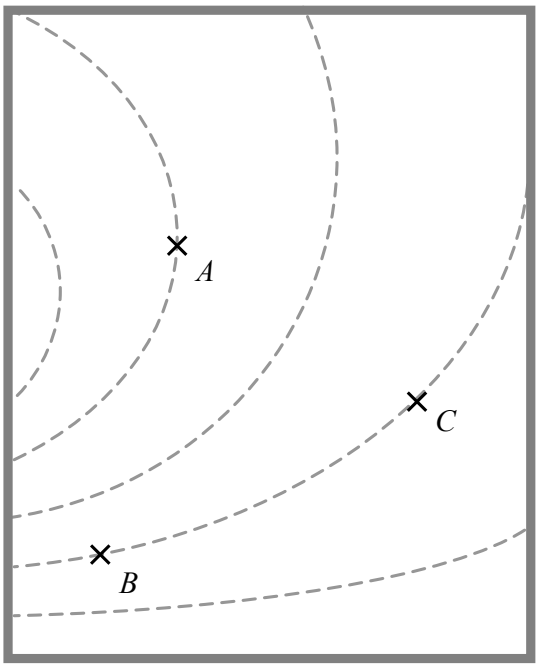
The diagram shown below right depicts a region of space. The dashed curves indicate positions of *equal potential energy* for a test charge $+q_{test}$ that is placed at various locations within this region. Three such locations *(A, B,* and *C)* are labeled.

It is known that the potential energy at location *A* is *greater than* that at locations *B* and *C*.



A. At each location, draw an arrow to indicate the direction in which the test charge $+q_{test}$ would move when released from rest at that location. Explain your reasoning.

B. Rank the locations *A, B,* and *C* according to the magnitude of the force that would be exerted on the test charge $+q_{test}$ at those locations, from greatest to smallest. Explain your reasoning.