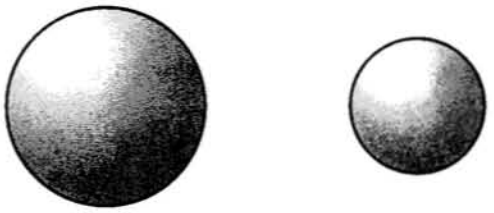
19 Two spheres P and Q are both made of steel. Sphere P has a radius that is larger than that of sphere Q.



sphere P
temperature T_P

sphere Q
temperature T_Q

Initially, sphere P is at temperature T_P and sphere Q is at temperature T_Q, where $T_P > T_Q$.

The spheres are brought into contact and their final temperature is T. No thermal energy is transferred from the spheres to the surroundings.

Which expression gives the relation between T_P, T_Q and T?

A $(T_P - T) = (T - T_Q)$

B $(T_P - T) > (T - T_Q)$

C $(T_P - T) < (T - T_Q)$

D $(T_P - T) = (T + T_Q)$