# Hand in 6

## FYSC20

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**Problem:** The centers of two circular conducting loops A and B, of radii $a$ and $b \gg a$, respectively, are located at the origin of a Cartesian coordinate system. At time $t = 0$ both loops lie on the $xy$-plane. While the larger loop remains at rest, the smaller loop, having a resistance $R$, rotates about one of its diameters lying on the $x$ axis with constant angular velocity $\omega$. A constant current $I$ circulates in the larger loop.