Circle $\mathrm{C}_{1}$ has equation $x^{2}+y^{2}-6 x-2 y-26=0$.
Circle $C_{2}$ has centre $(4,-2)$.
The radius of $C_{2}$ is equal to the radius of $C_{1}$.
Find the equation of circle $\mathrm{C}_{2}$.

Answer:
$(x-4)^{2}+(y+2)^{2}=36$

