The area function is $A(r) = \pi r^2$, so

$$\begin{aligned} dA &= A'(r)\, dr \\ &= 2\pi r\, dr. \end{aligned}$$

(For small values of dr, this will be a good approximation to ΔA, the true change in A.) Under the conditions of the problem, we get

$$dA = 2\pi \times 5 \times 0.2 \approx 6.28 \text{ cm}^2.$$