Definition 9.20. [ONW] Let $x \in X, r > 0$ be given; we will indicate with B(x,r) the **ball**, $B(x,r) \stackrel{\text{def}}{=} \{ v \in X : d(x,y) < r \}$

$$B(x,r) \stackrel{\text{def}}{=} \{ y \in X : d(x,y) < r \}$$
that is also indicated with B (x); and with

that is also indicated with $B_r(x)$; and with

$$D(x,r) \stackrel{\text{def}}{=} \{ y \in X : d(x,y) \le r \}$$

the **disk**, that is also indicated with $\overline{B}_r(x)$.