3.

Solution

To find the y-intercept, we set r equal to 0, so :

$r(y) = y^2 + y - 6 = (-2 + y)(3 + y) = 0$

$-2 + y = 0$ or $3 + y = 0$

$y = 2$ or $y = -3$

So, the y-intercepts are at the points $(2, 0)$ and $(-3, 0)$