5.

Solution

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

$u(r) = r^2 - 2r - 15 = (-5 + r)(3 + r) = 0$

$-5 + r = 0$ or $3 + r = 0$

$r = 5$ or $r = -3$

So, the r-intercepts are at the points $(5,0)$ and $(-3,0)$