3.

Solution

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

$$u(p) = p^2 - 8p + 15 = (-5 + p)(-3 + p) = 0$$

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

$p = 3$ or $p = 5$

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