

3.

Solution

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

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

$$-5 + z = 0 \text{ or } 3 + z = 0$$

$$z = 5 \text{ or } z = -3$$

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