Solution

To find the r-intercept, we set ${\sf v}$ equal to 0, so :

 $v(r) = r^2 - 9 r + 20 = (-5 + r) (-4 + r) = 0$

r= 4 or r= 5

-4 + r = 0 or -5 + r = 0

So, the r-intercepts are at the points (4,0) and (5,0)