

Exercise 9

For the following exercises, find the x - or t -intercepts of the polynomial functions.

$$C(t) = 2t(t - 3)(t + 1)^2$$

Solution

To find the t -intercepts, set $C(t) = 0$ and solve the equation for t .

$$2t(t - 3)(t + 1)^2 = 0$$

$$t = 0 \quad \text{or} \quad t - 3 = 0 \quad \text{or} \quad t + 1 = 0$$

$$t = 0 \quad \text{or} \quad t = 3 \quad \text{or} \quad t = -1$$

Therefore, the t -intercepts are $(-1, 0)$ and $(0, 0)$ and $(3, 0)$.

