

$$f(x) = x(4-x)(x+2)^2$$

$$f(-3) = -3 \cdot 7 \cdot (-1)^2 < 0$$

Zeros: $x=0$ $f(0)=0$

$$x=4$$

$$x=-2 = (-2)(4-(-2)) = 5 \cdot (-4) \cdot 7^2 < 0$$

$$= -2 \cdot 6 \cdot (-2+2)^2 = -2 \cdot 6 \cdot 0^2 = 0$$

$$f(-1) = -1(4-(-1))(1)^2 < 0$$

$$x=1$$

$$f(1) = 1(4-1)(1+2)^2 = 1 \cdot 3 \cdot 3^2 > 0$$

$$f(5) = 5(4-5)(5+2)^2 = 5 \cdot (-1) \cdot 7^2 < 0$$

