

## Math 3 Advanced

## 5.4 Practice Problems part 1

Determine the domain intervals for the local extrema of a polynomial function given in factored form.

1.  $f(x) = (x + 3)(x - 1)(x - 6)$

2.  $f(x) = (x + 5)(x + 2)(x - 4)$

3.  $f(x) = -(x + 7)(x + 3)(x - 11)$

4.  $f(x) = -(x - 2)(x - 7)(x - 9)$

5.  $f(x) = (x + 4)^2(x + 1)(x - 5)$

6.  $f(x) = (x + 7)(x + 2)(x - 3)^2$

7.  $f(x) = -(x + 8)(x - 1)(x - 7)^2$

8.  $f(x) = -(x + 5)(x - 3)^2(x - 11)$

9.  $f(x) = (x + 5)^2(x + 1)^2$

10.  $f(x) = (x - 2)^2(x - 8)^2$

11.  $f(x) = -(x - 5)^2(x - 12)^2$

12.  $f(x) = -(x + 9)^2(x - 1)^2$