▷. Following is a statement of a theorem which can be proven using the quadraticformula.

Theorem 7. Let $a, b, c \in \mathbb{R}$. If the function $f : \mathbb{R} \to \mathbb{R}$ is a quadratic function of the form

$$f(x) = ax^2 + bx + c$$

and $ac < 0$, then the function f has two x-intercepts.

▶. Using **only** Theorem 7, what can be concluded about the functions given by the following formulas? Justify (as if you are explaining to a fellow confused student) your answer using complete sentences.

1. $j(x) = -\frac{71}{99}x^2 + 210$

2. $F(x) = -x^4 + x^3 + 9$

. . . . . .

DELETE this whole sentence and THEN put your answer to ALL parts down here.