Exercise 1. Turn symbols into words.

1. $f^{-1}(0)$
2. $f(0)^{-1}$
3. $(f \circ g)^{-1}$
4. $f(\mathbb{R}^+)$
5. $f(A) \cap f(B)$
6. $\mathbb{Z} \cap f^{\ 1}(\mathbb{Z})$
7. $f(\mathbb{R}) \cap \mathbb{Q}$

Exercise 2. Explain clearly and plainly.

1. I have a positive integer. How do I check if it's prime?
2. I have a positive integer. How do I check if it's the sum of two squares?
3. I have two lines in three-dimensional space. How do I check if they intersect?
4. I have three points on the plane. How do I compute the center of the circle passing through them?
5. I have a list of quadratic polynomial functions and I must select the functions that assume both positive and negative values. What shall I do?