

EXERCISES SET THEORY (07)

2022/23

Some absoluteness.

1. Write down Δ_0 -formulas that express the following.
 - a. z is an ordered pair.
 - b. z is an ordered pair and x is its first coordinate.
 - c. z is an ordered pair and x is its second coordinate.
 - d. $z = x \times y$.
 - e. f is an injective function.
2. Prove that the following is absolute for transitive models of $\text{ZF} - \text{P}$:

$$x = A^n$$

Hint: We showed the existence of A^n in $\text{ZF} - \text{P}$ on 2022-10-10. Inspect the construction and show that the result is indeed absolute.