

MATH1025 Homework 5 Feedback

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The instructions to tutors are that work without a \LaTeX file should get a mark of '0'. So do brush up on your \LaTeX !

- Question 2.**
1. When you claim the relation does not satisfy a property, you should give a concrete counterexample of an element or a pair/triple of elements which do not satisfy the property.
 2. Please do not write text/words in math mode. If you absolutely need to, use a text environment such as $\text{\texttrm}\{\dots\}$.
 3. Why did you drop the modulus?
 4. Write indexes correctly with an underscore - x_2 vs $x2$.
 5. Use \mathbb for writing \mathbb{N} vs N (and similarly for other math boldface sets).

Question 4. Most of you had the correct idea about the equivalence classes, but struggled to express it rigorously.

1. Note that if \sim is an equivalence relation on a set X , then the equivalence class of an element $x \in X$, i.e. $[x]$, is a subset of X , not $X \times X$. This is why answers to questions such as $\{(x, y) : x \text{ positive and } y \text{ positive}\}$ are *not* correct, since they are subsets of $X \times X$ (also not correctly written in set notation).