
Algebra 1: Tutorial 3

When you answer these questions practise your proof writing.

Be clear, concise, and complete.

Question 1: Question

Question text

- a) Easy part of question
- b) A slightly harder part of question
- c) A much harder, but doable part of question

Question 2: Question

Consider the cyclic group $(\mathbb{Z}/12\mathbb{Z})$ in conjunction with the product groups $(\mathbb{Z}/3\mathbb{Z}) \times (\mathbb{Z}/4\mathbb{Z})$ and $(\mathbb{Z}/2\mathbb{Z}) \times (\mathbb{Z}/6\mathbb{Z})$. Which groups are isomorphic, if any?

Question 3: Question

Let φ be a surjective homomorphism between (easy)¹ groups. What is the exact correspondence via the correspondence theorem?

Question 4: Question

Question text

Question 5: Question

Question text

¹To determine later