

Quiz # 5

MATH 222

Name _____

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Consider two groups:

$$(G = \langle [4] \rangle \subseteq \mathbb{Z}_5 ; \cdot) \text{ and } (G' = \{ 1, -1 \} ; \cdot)$$

\cdot	[1]	[4]	\cdot	1	-1
[1]	[1]	[4]	1	1	-1
[4]	[4]	[1]	-1	-1	1

Let $\Phi : G \rightarrow G'$ be defined by

$$\Phi([1]) = 1, \quad \Phi([4]) = -1,$$

Show that Φ is an isomorphism from G to G'