

M328K Homework 10

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0.1 7.1.6

Find all $n \in \mathbb{Z}^+$ such that $\varphi(n) = 24$.

0.2 7.1.14

Find all $n \in \mathbb{Z}^+$ such that $\varphi(n) \mid n$.

0.3 7.1.20

Let $p \in \mathbf{P}$. Show that $p \nmid n$, where $n \in \mathbb{Z}^+$ iff $\varphi(np) = (p-1)\varphi(n)$.

0.4 7.1.32

Show that $m, n \in \mathbb{Z}^+, m \mid n \rightarrow \varphi(m) \mid \varphi(n)$.