

Steven Rosendahl
Homework 9

1. Directly calculate $\sum_{d|12} \phi(d)$ and verify that you obtain 12 as your answer.

$$\begin{aligned}\sum_{d|12} \phi(d) &= \phi(1) + \phi(2) + \phi(3) + \phi(4) + \phi(6) + \phi(12) \\ &= 1 + 1 + 2 + 2 + 2 + 4 \\ &= 12\end{aligned}$$