Math 565 - Spring 2019
Homework 6
Due April 3rd, 2019

I believe tht mathematical reality lies outside us, that our function is to discover or observe it, and that the theorems which we prove, and which we describe grandiloquently as our 'creation' are simply the notes of our observations.

— G. H. Hardy

Turn in: 6-1.1, 6-1.6, 6-1.12 (From the textbook) and the following:

(1) Compute $\varphi(64)$, $\varphi(180)$ and $\varphi(420)$.

(2) Suppose $f(n) = \frac{n+1}{n-1}$ and $g(n)$ is a function with the property that

$$f(n) = \sum_{d|n} g(d).$$

Compute $g(24)$.