Number Theory Homework Week 10

1. Let $n=30.$ Find $φ\left(n\right).$ Find $n\sum\_{d|n}^{}\frac{μ\left(d\right)}{d}$.
2. Find the sum of all the numbers less than 30 that are relatively prime with 30 directly and using $\frac{n}{2}φ(n)$.
3. Find the sum off all the numbers less than 33300 that are relatively prime with 333000.
4. Find the order of 7 modulo 30.
5. Find all the primitive roots does 30 have?
6. How many primitive roots does 333000 have?

5 pts each