Math 234 Preview Exercises

Section 8.5 _____

NAME

Read Section 8.5 in the textbook and answer the following questions. *Hand in this worksheet at the next class.*

1. What does the **Euclidean algorithm** compute?

2. What does it mean if integers a and b are **relatively prime**?

3. When using the Euclidean algorithm to compute $\gcd(330, 156)$, the first step of the algorithm yields that $\gcd(330, 156) = \gcd(156, 18)$. What is the next gcd that the algorithm finds to be equal to $\gcd(156, 18)$?

4. What is a **linear combination of integers**?

5. How is a gcd a linear combination of integers?

6. What is a **linear Diophantine equation**?