MATH 2320 – Discrete Mathematics Assignment #6
Fall 2017

Instructions

- Answer each question completely; justify your answers.
- This assignment is due at 17:00 on Thursday November 2nd in Assignment Box #35.

1. Find integers x and y such that $154x + 260y = 4$.
2. Show that there is no integer solution to $196x + 245y = 3$.
3. Prove: if $k \in \mathbb{N}$ then $\gcd(3k + 2, 5k + 3) = 1$.
4. Find the prime decompositions for:
   (a) $n = 123654$
   (b) $n = 50500$
5. Section 4.3, Exercise 9.
6. Section 4.3, Exercise 26, part (b).
7. Section 4.3, Exercise 32, parts (b) and (c).
8. Section 4.3, Exercise 35.