

CS 557
Homework 24
Due Thursday, 10 December 2009

1. Name a member of the ideal $\langle 5, 8 \rangle$:

2. Name a member of the ideal $\langle t^3 + 1, t^2 - 1 \rangle$, other than $t^2 - 1$, that does not contain a t^3 term.

3. Find a member of the ideal $\langle 2x + 3y - 1, x + y + 2 \rangle$ that does not contain the variable y .

4. Tell if the following statements about Ideals are true or false:
 - a. $3 \in \langle 5, 8 \rangle$
 - b. $3 \in \langle 6, 12 \rangle$
 - c. $2 \in \langle 8, 24 \rangle$
 - d. $\langle 5, 7 \rangle = \langle 11, 15 \rangle$
 - e. $\langle 12, 20, 28 \rangle = \langle 4 \rangle$

5. Find a single integer that generates the ideal $\langle 60, 84 \rangle$.

6. Find a single polynomial that generates the ideal $\langle t^3 + 1, t^2 - 1 \rangle$.