

Discrete Structures

Exam 2

11-5-2004

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1. Evaluate $\gcd(999,600)$ using the Euclidean algorithm.
2. How many positive integers ≤ 1000 are multiples of 6 or 8?
3. $A=\{1,2,3,4\}$ and $R=\{(a,b)|a+b<7\}$
 - a. Is R reflexive? symmetric? anti-symmetric? transitive?
 - b. Find the matrix of R.
4. $A=\{2,3,8,12,24\}$ and $R=\{(a,b)|a \text{ divides } b\}$.
Show that R is a partial order relation and draw the Hasse diagram.