

25. Read Sections 2.4 and 2.5 of the textbook.
26. Work on problems 19–28 of Section 2.4 in the textbook.
27. Let $X = \{1, 2, \dots, 14\}$ and $R = \{(x, y) \mid x, y \in X \text{ and } 5 \mid (x - y)\}$.
- Find all elements of R .
 - Is R reflexive, symmetric, antisymmetric, transitive, a partial order, or an equivalence relation (if so, find all equivalence classes)?
28. Let $X = \{1, 2, 3\}$ and $R = \{(A, B) \mid A, B \in \mathcal{P}(X) \text{ and } A \subset B\}$.
- Find all elements of R .
 - Is R reflexive, symmetric, antisymmetric, transitive, a partial order, or an equivalence relation (if so, find all equivalence classes)?
29. Let $X = \{1, 2, \dots, 10\}$. Define a relation \sim on $X \times X$ by $(a, b) \sim (c, d) \iff ad = bc$.
- Show that \sim is an equivalence relation.
 - List one member of each equivalence class.