

Examples:

1. Given the poset $(\{2, 3, 5, 10, 15, 20, 30, 60\}, |)$

(a) Draw the Hasse Diagram for this poset.

(b) Find the maximal elements.

(f) Find all upper bounds of $\{2, 5\}$

(c) Find the minimal elements.

(g) Find the least upper bound of $\{2, 5\}$ (if it exists).

(d) Find the greatest element or explain why there is no greatest element.

(h) Find all lower bounds of $\{20, 30\}$

(e) Find the least element or explain why there is no least element.

(i) Find the greatest lower bound of $\{20, 30\}$ (if it exists).

2. Given the poset $(\{2, 3, 4, 6, 8, 9, 10, 12, 16, 24\}, |)$

(a) Draw the Hasse Diagram for this poset.

(b) Find the maximal elements.

(f) Find all upper bounds of $\{2, 3\}$

(c) Find the minimal elements.

(g) Find the least upper bound of $\{2, 3\}$ (if it exists).

(d) Find the greatest element or explain why there is no greatest element.

(h) Find all lower bounds of $\{10, 12\}$

(e) Find the least element or explain why there is no least element.

(i) Find the greatest lower bound of $\{10, 12\}$ (if it exists).