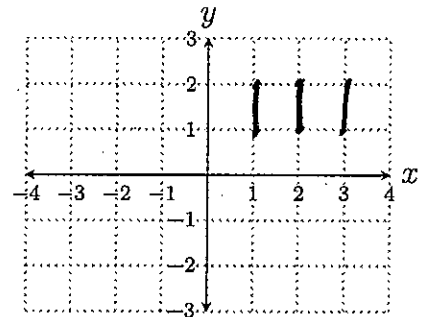


1. Suppose  $A = \{2, 3\}$  and  $B = \{0, \emptyset\}$ . Write  $A \times B$  by listing its elements between braces.

$$A \times B = \{(2, 0), (2, \emptyset), (3, 0), (3, \emptyset)\}$$

2. Sketch the set  $\{1, 2, 3\} \times [1, 2]$  on  $\mathbb{R}^2$ .



3. Suppose  $A = \{a, b, c, d\}$ , and let  $B = \{X \subseteq A : |X| \leq 1\}$ .

Write out  $B$  by listing its elements between braces.

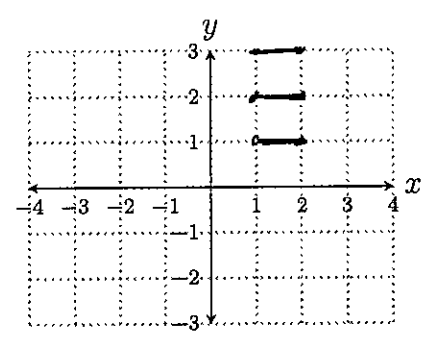
$$B = \{\emptyset, \{a\}, \{b\}, \{c\}, \{d\}\}$$

4. If  $B = \{2, 4, 6\}$ , then  $\mathcal{P}(B) = \{\emptyset, \{2\}, \{4\}, \{6\}, \{2, 4\}, \{2, 6\}, \{4, 6\}, \{2, 4, 6\}\}$

1. Suppose  $A = \{a, b, c\}$  and  $B = \{0, 1\}$ . Write  $A \times B$  by listing its elements between braces

$$A \times B = \{ (a, 0), (a, 1), (b, 0), (b, 1), (c, 0), (c, 1) \}$$

2. Sketch the set  $[1, 2] \times \{1, 2, 3\}$  on  $\mathbb{R}^2$ .



3. Suppose  $A = \{a, b, c, d\}$ , and let  $B = \{X \subseteq A : |X| = 2\}$ .  
Write out  $B$  by listing its elements between braces.

$$B = \{ \{a, b\}, \{a, c\}, \{a, d\}, \{b, c\}, \{b, d\}, \{c, d\} \}$$

4. If  $A = \{0, \emptyset\}$ , then  $\mathcal{P}(A) = \{ \emptyset, \{0\}, \{\emptyset\}, \{0, \emptyset\} \}$