Worksheet §1.2-1.4

1. Let $A = \{1, 2, 3\}$ and $B = \{2, 3, 4\}$.

   (a) List 3 elements of $A \times B$.

   (b) Find all elements of $A \times B$ which are *not* in $B \times A$.

   (c) Find an element of A^2 which is *not* in $A \times B$ nor in $B \times A$.

2. Compute $\#(\mathscr{P}(\mathscr{P}(\mathscr{P}(\mathscr{P}(\varnothing)))))$.

3. For $m \in \mathbb{R}$, let L_m be the set $\{(x, y) \in \mathbb{R}^2 \mid y = mx\}$. Draw L_2 and L_{-1}.