Example: \( U = \{ 5, 7, 4, 1, q, 9, 5 \} \)
\( A = \{ 4, 5, q \} \)
\( B = \{ 7, q \} \)

Find:
\( B \times B = \{ (7,7), (7, q), (q, 7), (q, q) \} \)
\( A - B = \{ 4, 5 \} \)
\( B - A = \{ \{ 7 \} \; \text{if} \; |U| - |\{ 7 \}| = 6 - 1 = 5 \}
\( P(B) = \{ \{ 3 \}, \{ 7 \}, \{ q \}, \{ 7, q \} \} \)
\( |P(B) \times A| = 2^2 \cdot 3 = 12 \)

Example: How many ways can you order a pizza? Given: there are
- 3 kinds of crust (regular, thin, cheese-stuffed)
- 2 sizes (large, small)
- 4 toppings (but you can only pick 1, and you must pick 1).

Problem 1

Problem 2

Same, but: cheese-stuffed crust only available in large size.

We'll make a possibility (decision) tree for each.