

Possible Solutions

David is making a sandwich. Each sandwich consists of bread, cheese and meat. David can choose from white, French or rye bread. He may choose either American or Swiss cheese and has the choice of eating turkey, ham or pastrami meat. Represent this situation using a list or a tree diagram.

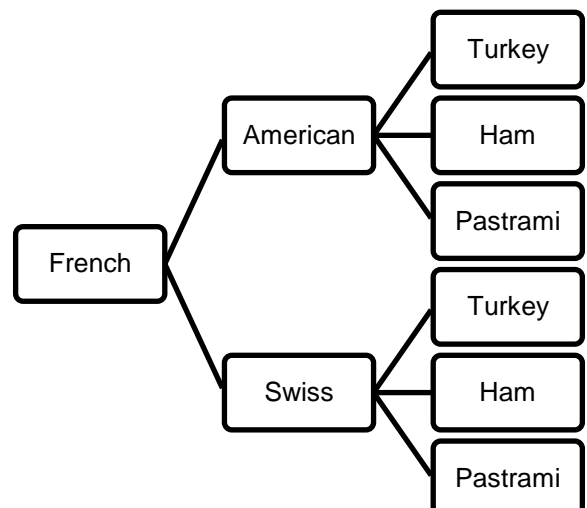
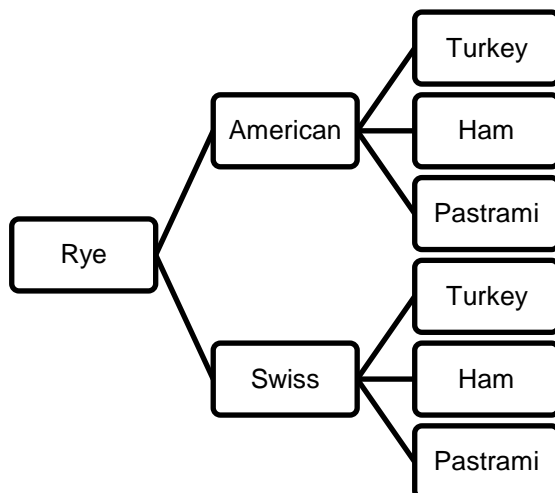
Solution 1

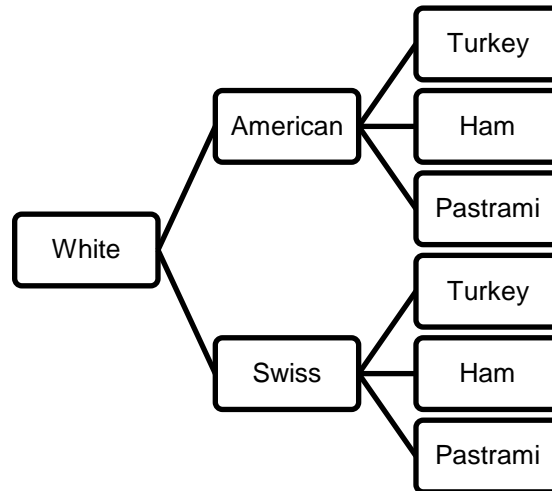
| Bread | Cheese | |
|--------|----------|-------|
| | American | Swiss |
| White | W - A | W - S |
| French | F - A | F - S |
| Rye | R - A | R - S |

| Bread | Turkey | Ham | Pastrami |
|-------|-----------|-----------|-----------|
| W - A | W - A - T | W - A - H | W - A - P |
| W - S | W - S - T | W - S - H | W - S - P |
| F - A | F - A - T | F - A - H | F - A - P |
| F - S | F - S - T | F - S - H | F - S - P |
| R - A | R - A - T | R - A - H | R - A - P |
| R - S | R - S - T | R - S - H | R - S - P |

There are 18 combinations of sandwiches.

Solution 2





There are 18 combinations of sandwiches.

Solution 3

Sample space = $\{(W, A, T), (W, A, H), (W, A, P), (W, S, T), (W, S, H), (W, S, P), (F, A, T), (F, A, H), (F, A, P), (F, S, T), (F, S, H), (F, S, P), (R, A, T), (R, A, H), (R, A, P), (R, S, T), (R, S, H), (R, S, P)\}$

There are 18 combinations of sandwiches.