```
1. A = ['a', 'b', 'c', 'd'], B = ['v', 'w', 'x', 'y', 'z'], f = [('a', 'z'), ('b', 'y'), ('c', 'x'), ('d', 'w')]
a) The relation is a function.
b) The relation is:
- The relation is injective: True
- The relation is surjective: False

2. A = ['a', 'b', 'c', 'd'], B = ['x', 'y', 'z'], f = [('a', 'z'), ('b', 'y'), ('c', 'x'), ('d', 'z')]
a) The relation is a function.
b) The relation is:
- The relation is injective: False
- The relation is surjective: False

3. A = ['a', 'b', 'c', 'd'], B = ['w', 'x', 'y', 'z'], f = [('a', 'z'), ('b', 'y'), ('c', 'x'), ('d', 'w')]
a) The relation is a function.
b) The relation is:
- The relation is injective: True
- The relation is surjective: True
The relation is bijective.
c) The inverse of f is: [('z', 'a'), ('y', 'b'), ('x', 'c'), ('w', 'd')]

4. A = ['a', 'b', 'c', 'd'], B = {1, 2, 3, 4, 5}, f = {('a', 4), ('b', 5), ('c', 1), ('d', 3)}
a) The relation is a function.
b) The relation is:
- The relation is injective: True
- The relation is surjective: False

5. A = ['a', 'b', 'c'], B = {1, 2, 3, 4}, f = {('a', 3), ('b', 4), ('c', 1)}
a) The relation is a function.
b) The relation is:
- The relation is injective: True
- The relation is surjective: False

6. A = ['a', 'b', 'c', 'd'], B = {1, 2, 3, 4}, f = {('d', 2), ('b', 1), ('a', 2), ('c', 3)}
a) The relation is a function.
b) The relation is:
- The relation is injective: False
- The relation is surjective: True

7. A = ['a', 'b', 'c', 'd'], B = {1, 2, 3, 4}, f = {('d', 2), ('a', 4), ('b', 1), ('c', 3)}
a) The relation is a function.
b) The relation is:
- The relation is injective: True
- The relation is surjective: True
The relation is bijective.
c) The inverse of f is: [(2, 'd'), (4, 'a'), (1, 'b'), (3, 'c')]
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8. A = ['a', 'b', 'c'], B = {1, 2, 3, 4}, f = {('a', 2), ('d', 3), ('b', 1), ('c', 2)}
a) The relation is a function.
b) The relation is:
- The relation is injective: False
- The relation is surjective: True

9. A = ['a', 'b', 'c'], B = {1, 2, 3, 4}, f = {('a', 4), ('b', 1), ('a', 2), ('c', 3)}
a) The relation is not a function.