

Homework 17, Section 4.2: 4, 9(c), 11, 12, 20

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Homework

4.

$N(C) : P(S) \rightarrow \{0, 1, 2, 3\}$ is the result and is interpreted as "The size of the compliment of."

9. C)

f has domain $\{1, 2, 3, 4\}$.

Codomain $\{a, b, c, d\}$.

The resulting set is $\{(1, b), (2, a), (3, c), (4, d)\}$

11

- 1) $x(b) = A$
- 2) $(x \circ y)(A) = x(y(A))$
- 3) $x(b) = A$
- 4) $(x \circ y)(A) = A$
- 5) $(y \circ x)(A) = y(A)$
- 6) $y(A) = B$
- 7) $(y \circ x)$

12

- 1) $x(B) = A$
- 2) $(x \circ y)(A) = x(y(A))$
- 3) $x(B) = a$
- 4) $(x \circ y)(A) = A$

$$5) (f \circ x)(B) = y(A)$$

$$6) f(A) = B$$

$$7) (y \circ x)$$

20

$(y, a) \in S$ suggests that town y is the location that a was born.