

Foam Test 3 Review

- (1) Do Test 1 Review, then rework Test 1.
- (2) Do Test 2 Review, then rework Test 2.
- (3) Rework all quizzes, 1-10.

Given sets $A = \{4, 7, 8, 9, 2\}$, $B = \{5, 9, 1\}$

- (4) Let $R = \{(7, 9), (2, 8), (4, 5), (2, 1)\}$ Is R a relation from A to B ? _____
- (5) Let $R = \{(5, 9), (5, 5), (1, 1), (9, 5)\}$ Is R a symmetric relation from B to B ? _____
- (6) Let $R = \{(5, 9), (5, 5), (1, 1), (9, 5)\}$ Is R a reflexive relation from B to B ? _____
- (7) Let $R = \{(5, 9), (5, 5), (1, 1), (9, 5)\}$ Is R a transitive relation on B ? _____
- (8) Let $R = \{(5, 9), (1, 1), (9, 5)\}$ Is R a transitive relation on B ? _____
- (9) Let $R = \{(5, 1), (1, 1), (9, 5)\}$ Is R a transitive relation on B ? _____
- (10) Let $R = \{(7, 9), (2, 1), (4, 5), (2, 5)\}$ Is R a function from A to B ? _____
- (11) Let $R = \{(5, 9), (1, 7), (9, 4)\}$ Is R a function from B to A ? _____
- (12) Let $R = \{(5, 9), (1, 7), (9, 4)\}$ Is R an onto function from B to A ? _____
- (13) Let $R = \{(5, 9), (1, 7), (9, 4)\}$ Is R a 1-1 function from B to A ? _____
- (14) Let $R = \{(5, 9), (1, 7), (9, 4)\}$ Find the range of R . _____
- (14b) Find the number of onto functions from A to B . _____
- (14c) Find the number of equivalence relations on A . _____

Given sets $A = \{4, 7, 8, 9, 2\}$, $B = \{5, 9, 1\}$

(15) Let $f = \{(5, 9), (1, 1), (9, 5)\}$ and $g = \{(5, 1), (1, 1), (9, 5)\}$.

Find the composition $f \circ g$ _____

(16) Let $f = \{(5, 9), (1, 1), (9, 5)\}$ and $g = \{(5, 1), (1, 1), (9, 5)\}$.

Find the composition $g \circ f$ _____

(17) Find the number of functions from A to B . _____

(18) Find the number of functions from A to A . _____

(19) Find the number of functions from B to A . _____

(20) Find the number of 1-1 functions from A to B . _____

(21) Find the number of 1-1 functions from B to A . _____

(22) Find the number of 1-1 functions from A to A . _____

(23) Find the number of relations on B . _____

(24) Find the number of symmetric relations on B . _____

(25) Find the number of reflexive relations on B . _____

(26) Find the number of both reflexive and symmetric relations on B . _____