Discrete 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, 1-9.

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. _____

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. _____