NAMA = ARBAI

NIM = 223220066

LATIHAN 1

A = { p, q }
R = {(p, 2), (p, 3), (q, 1), (q, 2)}
T = {(p, 1), (q, 1), (q, 2)}
B = {1, 2, 3 }

TENTUKAN :
a. $R \cup T$
b. $R \cap T$
c. -R
d. – T

JAWAB :
a. $R \cup T$ = {(p, 2), (p, 3), (q, 1), (q, 2), (p, 1)}
b. $R \cap T$ = {(q, 1), (q, 2)}
c. – R = {(p, 1)}
d. -T = {(p, 2), (p, 3)}

LATIHAN 2

1. A = { 1, 2, 3, 4, 5, 6 }
   B = { Bilangan bulat positif }
   Relasi R adalah $\subseteq AxB$ dan (a, b) $\in R$ jika dan hanya jika b = a+4. Tentukan R

2. A = {1, 2, 3, 4, 5, 6 }
   B = {1, 3, 5, 7, 9}
   Relasi R adalah $\subseteq AxB$ dan (a, b) $\in R$ jika dan hanya jika a<b. Tentukan R

JAWAB :
1. R = {(1,5), (1,6), (1,7), (1,8), (1,9), (1,10), (2,5), (2,6,), (2,7), (2,8), (2,9), (2,10), (3,5), (3,6), (3,7), (3,8), (3,9), (3,10), (4,5), (4,6), (4,7), (4,8), (4,9), (4,10), (5,5), (5,6), (5,7), (5,8), (5,9), (5,10), (6,5), (6,6), (6,7), (6,8),(6,9), (6,10)}

2. R = {(1,3), (1,5), (1,7), (1,9), (2,3), (2,5), (2,7), (2,9), (3,5), (3,7), (3,9), (4,5), (4,7), (4,9), (5,7), (5,9), (6,7), (6,9)}

LATIHAN 3

1. Let A = {w, x, y, z} and B = {a, b}. use the set-roaster notation to write each of the following sets,and indicate the number of element that are in each set :

a. A x B
b. B x A
c. A x A
d. B x B

2. Let S = {2, 4, 6} and T = {1, 3, 5}. Use the set-roaster notation to write each of the following sets,
and indicate the number of elements that are in each set :

a. S x T
b. T x S
c. S x S
d. T x T

JAWAB :

1.
a.- A x B = {(w,a), (w,b), (x,a), (x,b), (y,a), (y,b), (z,a), (z,b)}
b.-B x A = {(a,w), (a,x), (a,y), (a,z), (b,w), (b,x), (b,y), (b,z)}
c.- A x A = {(w,w) (w,x), (w,y), (w,z), (x,w), (x,x) (x,y), (x,z), (y,w), (y,x), (y,y), (y,z), (z,w), (z,x), (z,y), (z,z)}
d.- B x B = {(a,a) (a,b), (b,a), (b,b)}
2.
a.- S x T = {(2,1), (2,3), (2,5), (4,1), (4,3), (4,5), (6,1), (6,3), (6,5)}
b.- T x S = {(1,2), (1,4), (1,6), (3,2), (3,4), (3,6), (5,2), (5,4), (5,6)}
c.- S x S = {(2,2), (2,4), (2,6), (4, 2), (4, 4), (4,6), (6,2), (6,4), (6,6)}
d.- T x T = {(1,1), (1,3), (1,5), (3,1), (3,3), (3,5), (5,1), (5,3), (,5)}