

Self Exercise 6

John McRyan Avijā

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You need to show

1. $\{(a,2), (a,4), (a,5), (b,2), (b,4), (b,5), (c,2), (c,4), (c,5), (d,2), (d,4), (d,5), (e,2), (e,4), (e,5)\}$

$$|A| = 5, |B| = 3$$

$$|A \times B| = |A| \cdot |B| = 5 \times 3 = 15$$

no element in common!!

2. Disjoint set between two sets defined as symmetric difference as the set of all elements that belong to A or to B, but not to both A and B.

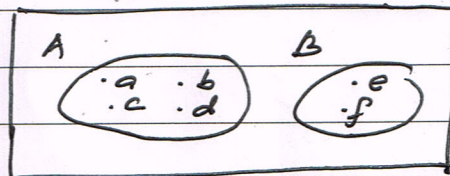
Example:

$$A = \{a, b, c, d\}$$

$$B = \{e, f, g\}$$

$$A \oplus B = \{b, d, e, f, g\}$$

$$A \oplus B = (A - B) \cup (B - A)$$



3 a)	Domain	Range
b)	A	B
	1	x
	2	y
	3	z

What is the domain of R??

What is the range of R?

You need to answer.

$$c) = \{(x,1), (x,2), (x,3), (y,1), (y,2), (y,3), (z,1), (z,2), (z,3)\}$$

$$d) i) \text{ True}$$

$$ii) \text{ False}$$

$$iii) \text{ True}$$

$$|B \times A| = |B| \times |A|$$

$$= 3 \times 3 = 9$$

$$4. R = \{(1,2), (2,1), (2,4), (3,3)\}$$