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Prof. Seleem

CS 2200

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Homework #1

1.2.9   c. No

    d. Yes

    e. Yes

    g. Yes

1.2.12 a. {(2, 1), (2, 3), (2, 5), (4, 1), (4, 3), (4, 5), (6, 1), (6, 3), (6, 5)} 9 elements

    b. {(1, 2), (1, 4), (1, 6), (3, 2), (3, 4), (3, 6), (5, 2), (5, 4), (5, 6)} 9 elements

    c. {(2, 2), (2, 4), (2, 6), (4, 2), (4, 4), (4, 6), (6, 2), (6, 4), (6, 6)} 9 elements

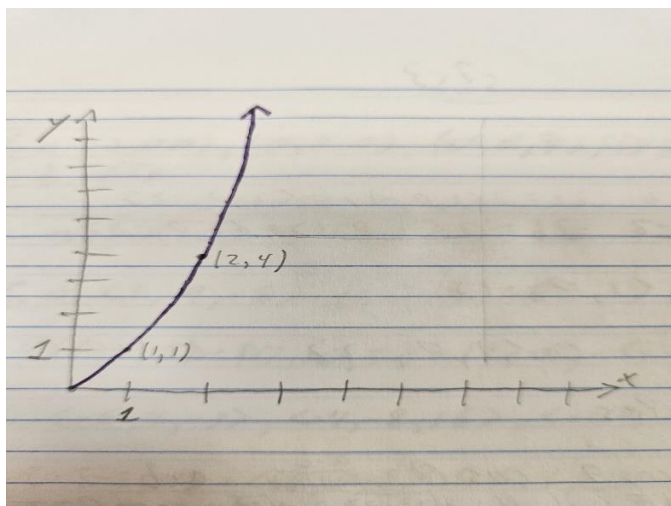   d. {(1, 1), (1, 3), (1, 5), (3, 1), (3, 3), (3, 5), (5, 1), (5, 3), (5, 5)} 9 elements

S X T = (x, p) (x, q) (x, r) (y, p) (y, q), (y, r)   R X T = (a, x) (a, y)

1.2.14 a. {(a, (x, p)), (a, (x, q)), (a, (x, r)), (a, (y, p)), (a, (y, q)), (a, (y, r))}

    b. {((a, x), p), ((a, y), p), ((a, x), q), ((a, y), q), ((a, x), r), ((a, y), r)}

    c. {(a, x, p), (a, x, q), (a, x, r), (a, y, p), (a, y, q), (a, y, r)}

1.3.6   a. Yes. No. Yes.

b.

1.3.15 Arrow diagram d is the only function.