Examen RelBin

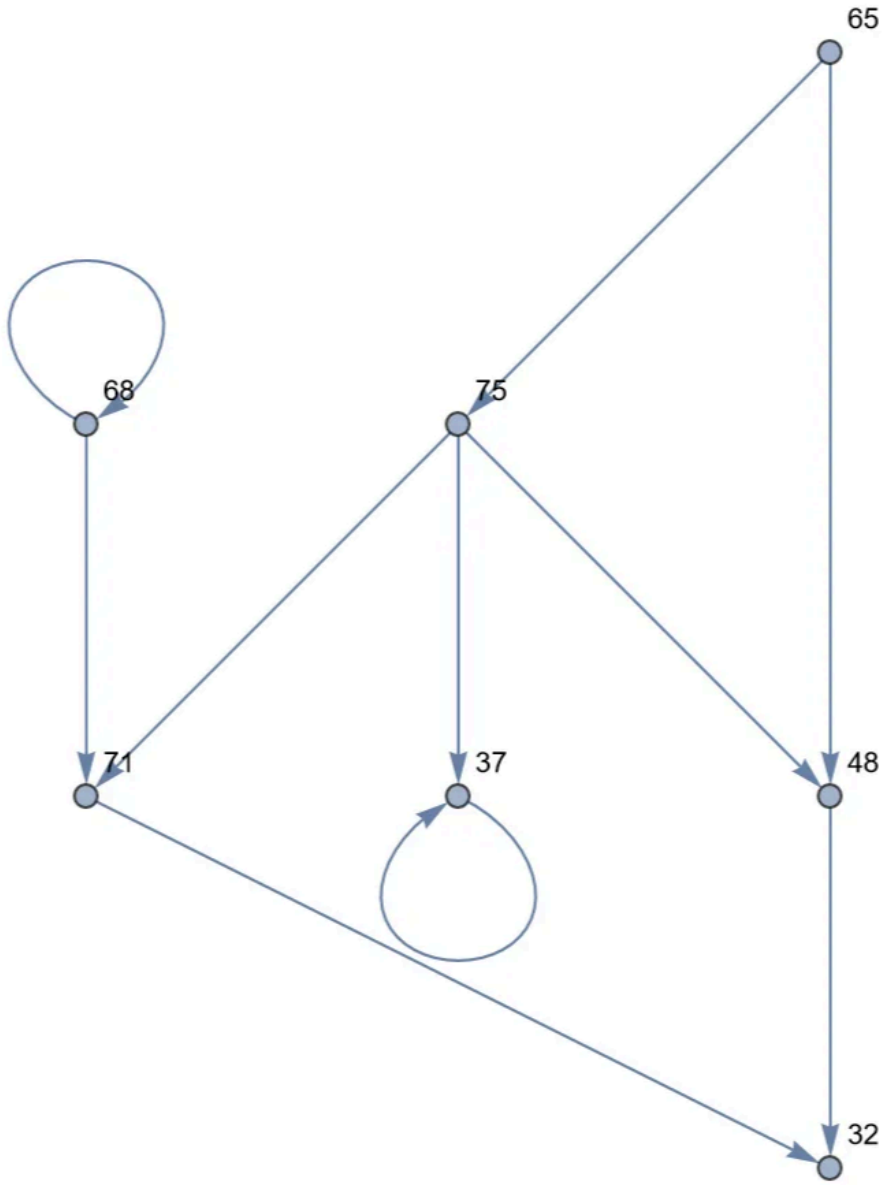
Etiquetas

Pregunta #1

Sea:

$A = 71, 75, 68, 74, 32, 37, 65, 48$

Suponga que la relación R sobre A es tal que su digrafo corresponde a:



Complete la matriz M_R asociada a esta relación tomando el orden definitivo en A:

Reflexiva: _____

Transitiva: _____
Simétrica:
_____

Antisimétrica: _____

Equivalencia: _____

Orden Parcial: _____

▼ Pregunta #2

Sea:

$A = 41, 75, 76, 78, 98$

Sobre A se defina la relación R cuya matriz de adyacencia es:

$$\begin{pmatrix} 1 & 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 1 & 1 \\ 1 & 0 & 1 & 0 & 1 \\ 1 & 1 & 1 & 1 & 1 \end{pmatrix}$$

Determine los pares ordenados de la relación:

📌 Nota: Respuesta única

☐ {{41, 41}, {41, 76}, {75, 41}, {75, 98}, {76, 76}, {76, 78}, {76, 98}, {78, 41}, {78, 76}, {78, 98}, {98, 41}, {98, 75}, {98, 76}, {98, 78}, {98, 98}}

☐ {{41, 48}, {41, 76}, {75, 41}, {75, 98}, {76, 76}, {76, 78}, {76, 98}, {78, 41}, {78, 76}, {78, 98}, {98, 41}, {98, 75}, {98, 76}, {98, 78}, {98, 98}}

☐ {{41, 41}, {41, 76}, {75, 41}, {75, 98}, {76, 76}, {76, 78}, {76, 98}, {78, 41}, {78, 76}, , {98, 41}, {98, 75}, {98, 76}, {98, 78}, {98, 98}}

☐ {{41, 41}, {41, 74}, {75, 41}, {75, 98}, {76, 76}, {76, 78}, {76, 98}, {78, 41}, {78, 76}, {78, 98}, {98, 41}, {98, 75}, {98, 76}, {98, 78}, {98, 98}}

Reflexiva: _____

Transitiva: _____
Simétrica:
_____

Antisimétrica: _____

Equivalencia: _____

Orden Parcial: _____

▼ Pregunta #3

Sea:

A={-801, -796, -791,...., 1194, 1199, 1204}

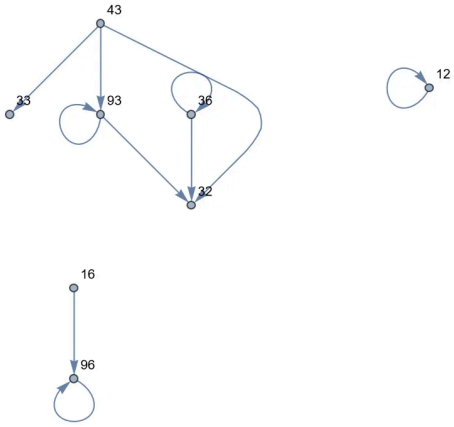
B={-3012, -2989, -2966,...,-68, -45, -22, 1}

Indique el numero de elementos con A x B: _____

▼ Pregunta #4

Sea:

$A = 12, 96, 32, 36, 93, 16, 43, 33$



Complete la matriz en M_R asociada a esta relación tomando el orden definido en A.

Reflexiva: _____

Transitiva: _____

Simétrica:
_____

Antisimétrica: _____

Equivalencia: _____

Orden Parcial: _____

▼ Pregunta #5

Sea:

A={-672547, -668655, -664763,....,43581, 47473, 51365}

B={-64273, -61490, -58707,...,, -5830, -3047, -264}

Indique el numero de elementos del dominio de A x B: _____

▼ Pregunta #6

Sea A ={89, 6, 24, 81, 31}

Supongamos que $R1$ y R2 es una relación de A en A dada por:

R1 = {{81, 6}, {6, 31}, {31, 31}, {24, 81}, {6, 89}, {24, 24}, {89,89}, {6, 24}, {89, 24}, {6, 6}, {31, 81}, {89, 31}, {31, 89}, {24,31}, {81, 31}}

R2 = {{24, 31}, {81, 81}, {81, 31}, {89, 31}, {6, 31}, {31, 31}, {89, 89}, {24, 24}, {81, 6}, {24, 81}, {6, 24}, {81, 24}, {31, 24}, {81, 89}, {6, 89}}

$$R = \left(\overline{R_1} \cap R_2\right) \cup (R_1 \cdot R_2)$$

Construya la Matriz MR en base a la relación R, y responda lo siguiente:

Reflexiva: _____

Transitiva: _____

Simétrica:
_____

Antisimétrica: _____

Equivalencia: _____

Orden Parcial: _____

▼ Pregunta #7

Sea A={44, 28, 91, 38, 74}

Supongamos que $R1$ y R2 es una relación de A en A dada por:

R1={{91, 28}, {74, 28}, {28, 91}, {28, 44}, {38, 91}, {44, 28}, {28,28}, {38, 28}, {91, 74}, {74, 91}, {74, 44}, {44, 74}, {44, 91}, {38, 74}, {74, 38}}

R2= {{28, 28}, {38, 44}, {74, 74}, {74, 91}, {38, 91}, {74, 28}, {91, 74}, {44, 44}, {38, 28}, {44, 91}, {91, 44}, {74, 44}, {44, 74}, {28, 91}, {28, 74}}

$$R = \left(R_2 \cdot R_1^{-1}\right) \cap \left(\overline{R_2} \cup R_1\right)$$

La relación R esta dada por los siguientes pares ordenados:

☐ {{28, 28}, {28, 38}, {28, 44}, {28, 91}, {38, 28}, {38, 38}, {38, 74}, {38, 91}, {44, 28}, {44, 38}, {44, 74}, {44, 91}, {74, 28}, {74, 38}, {74, 44}, {74, 91}, {91, 28}, {91, 38}, {91, 74}}

☐ {{28, 28}, {28, 38}, {28, 44}, {28, 91}, {38, 28}, {38, 38}, {38, 74}, {38, 91}, {44, 28}, {44, 38}, {44, 74}, {44, 91}, {74, 28}, {74, 38}, {74, 44}, {74, 91}, {91, 28}, {91, 38}, {91, 74}, {92, 91}}

☐ {{21, 28}, {28, 38}, {28, 44}, {28, 91}, {38, 28}, {38, 38}, {38, 74}, {38, 91}, {44, 28}, {44, 38}, {44, 74}, {44, 91}, {74, 28}, {74, 38}, {74, 44}, {74, 91}, {91, 28}, {91, 38}, {91, 74}, {91, 91}}

☐ {{28, 28}, {28, 38}, {28, 44}, {28, 91}, {38, 28}, {38, 38}, {38, 74}, {38, 91}, {44, 28}, {44, 38}, {44, 74}, {44, 91}, {74, 28}, {74, 38}, {74, 44}, {74, 91}, {91, 28}, {91, 38}, {91, 74}, {91, 91}}

☐ {{28, 28}, {28, 39}, {28, 44}, {28, 91}, {38, 28}, {38, 38}, {38, 74}, {38, 91}, {44, 28}, {44, 38}, {44, 74}, {44, 91}, {74, 28}, {74, 38}, {74, 44}, {74, 91}, {91, 28}, {91, 38}, {91, 74}, {91, 91}}

Construya la Matriz MR en base a la relación R, y responda lo siguiente:

Reflexiva: _____

Transitiva: _____

Simétrica:
_____

Antisimétrica: _____

Equivalencia: _____

Orden Parcial: _____

▼ Pregunta #8

Sea A={61, 77, 65, 7, 30, 5, 43, 32, 33}

Supongamos que $R1$ y R2 es una relación de A en A dada por:

R1={{30, 77}, {5, 32}, {77, 33}, {77, 7}, {30, 32}, {65, 33}, {7, 7}, {5, 7}, {33, 5}, {61, 61}, {65, 30}, {65, 65}, {77, 65}, {33, 61}, {61, 33}}

R2= {{43, 5}, {30, 61}, {65, 43}, {7, 77}, {30, 33}, {33, 7}, {65, 65}, {5, 61}, {32, 77}, {65, 32}, {43, 7}, {32, 30}, {7, 43}, {61, 5}, {61, 32}}

$R = \left(\overline{R_1} \cdot R_2\right) \cup \left(R_1^{-1} \cap R_2\right)$

Clases de equivalencia:

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¡Que la fuerza los acompañe!