

Funktionen

Dokumentnummer: DX1026

Fachgebiet: Relationen

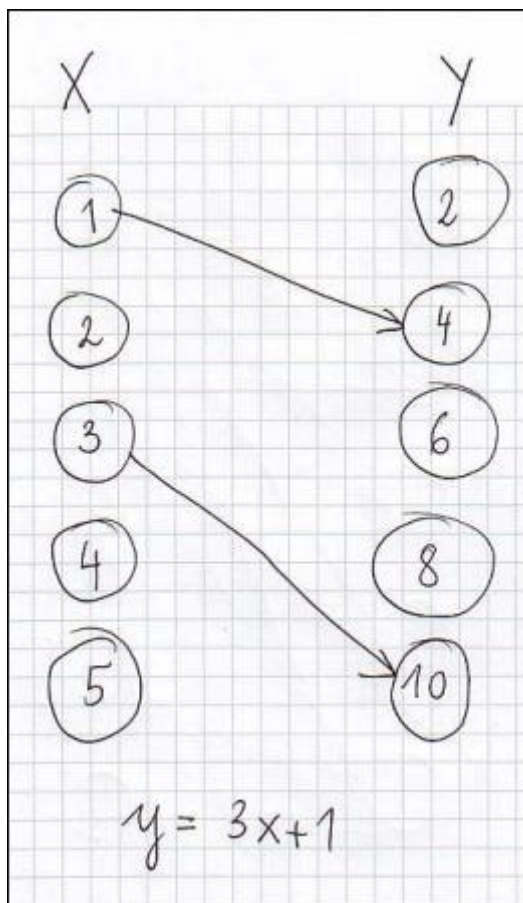
Funktionen

eindeutige Zuordnungen

Produktmenge

Teilmenge

Beispiel 1



(%i12) $A:\{1,2,3,4,5\};B:\{2,4,6,8,10\}$ /* diese Mengen werden auch für alle anderen Beispiele verwendet */;

(%o12) $\{1, 2, 3, 4, 5\}$

(%o13) $\{2, 4, 6, 8, 10\}$

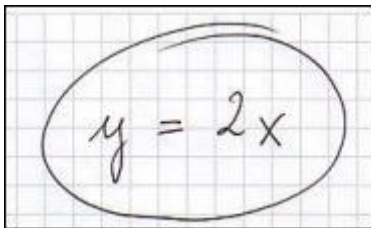
(%i3) S:cartesian_product(A,B);

(%o3) {[1, 2], [1, 4], [1, 6], [1, 8], [1, 10], [2, 2], [2, 4], [2, 6], [2, 8], [2, 10], [3, 2], [3, 4], [3, 6], [3, 8], [3, 10], [4, 2], [4, 4], [4, 6], [4, 8], [4, 10], [5, 2], [5, 4], [5, 6], [5, 8], [5, 10]}

(%i4) F1:subset(S,lambda([e],is(e[2]=3*e[1]+1)));

(%o4) {[1, 4], [3, 10]}

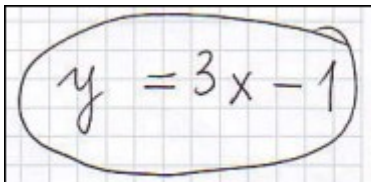
Beispiel 2


$$y = 2x$$

(%i6) F2:subset(S,lambda([e],is(e[2]=2*e[1])));

(%o6) {[1, 2], [2, 4], [3, 6], [4, 8], [5, 10]}

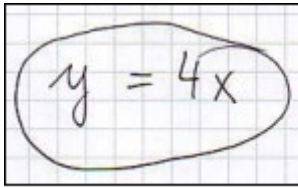
Beispiel 3


$$y = 3x - 1$$

(%i7) F3:subset(S,lambda([e],is(e[2]=3*e[1]-1)));

(%o7) {[1, 2], [3, 8]}

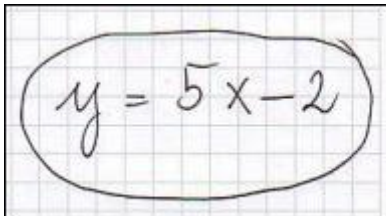
Beispiel 4


$$y = 4x$$

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(%i8) F4:subset(S,lambda([e],is(e[2]=4*e[1]]));
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(%o8) {[1, 4], [2, 8]}
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Beispiel 5


$$y = 5x - 2$$

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(%i11) F5:subset(S,lambda([e],is(e[2]=5*e[1]-2)));
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(%o11) {[2, 8]}
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