



# KURS ZBIORY

LEKCJA 3  
Iloczyny kartezjańskie

Odpowiedzi do Zadania Domowego



## Część 1: TEST

- 1) c
- 2) b
- 3) c
- 4) a
- 5) a
- 6) b
- 7) b
- 8) d
- 9) b
- 10) d

## ODPOWIEDZI DO ZADAŃ

### Zad. 1

- a)  $\{(1,2), (1,3), (1,4), (1,5), (1,6), (1,7), (2,2), (2,3), (2,4), (2,5), (2,6), (2,7), (3,2), (3,3), (3,4), (3,5), (3,6), (3,7)\}$
- b)  $\{(2,1), (3,1), (4,1), (5,1), (6,1), (7,1), (2,2), (3,2), (4,2), (5,2), (6,2), (7,2), (2,3), (3,3), (4,3), (5,3), (6,3), (7,3)\}$
- c)  $\{(1,1), (1,2), (1,3), (2,1), (2,2), (2,3), (3,1), (3,2), (3,3)\}$
- d)  $\{(1,2), (1,3), (1,4), (1,5), (1,6), (1,7), (2,3), (2,4), (2,5), (2,6), (2,7), (3,4), (3,5), (3,6), (3,7)\}$
  
- e)  $\{(2,3)\}$
- f)  $\{(2,2), (3,7)\}$
- g)  $\{(5,7), (7,5), (6,7), (7,6), (6,6), (7,7)\}$
- h)  $\{(1,3), (3,1), (2,2)\}$

### Zad. 2

- a)  $\{(a,b), (a,c), (a,d), (b,b), (b,c), (b,d), (c,b), (c,c), (c,d)\}$
- b)  $\{(b,a), (c,a), (d,a), (b,b), (c,b), (d,b), (b,c), (c,c), (d,c)\}$
- c)  $\{(b,b), (c,c)\}$

**Zad. 3**

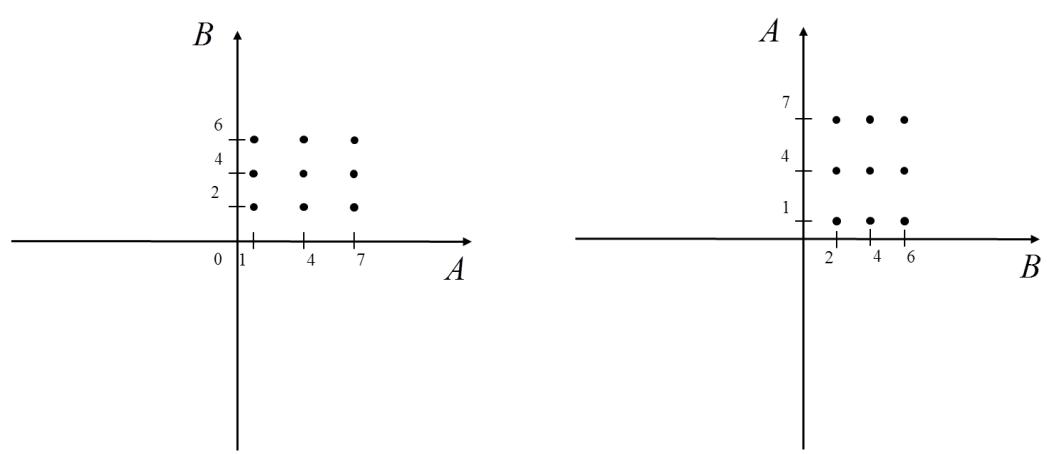
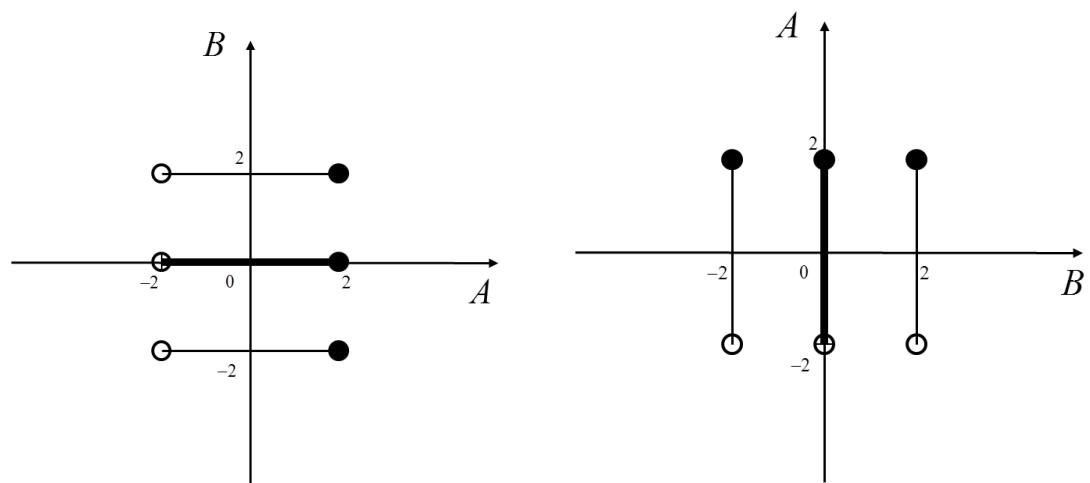
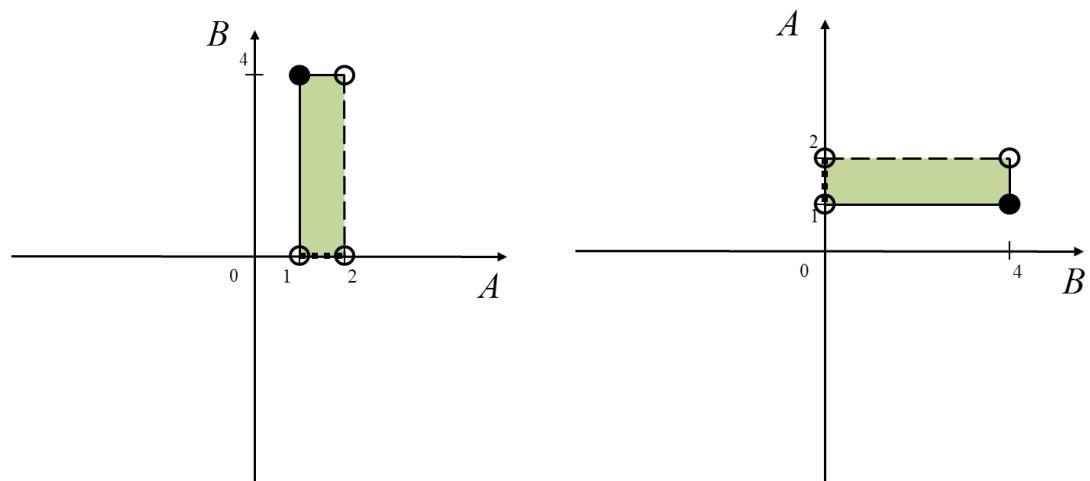
- a)  $(2,1), (3,2), (10,9), (20,19), (4,3)$
- b)  $(4,2), (9,3), (7,7), (28,4), (1,1)$
- c)  $(1,-1), (3,-2), (-6,-6), (0,-100), (-50,-11)$
- d)  $(0,-2), (-2,-2), (-2,-1), (-2,100), (2,-2)$
- e)  $(2,\sqrt{2}), (3,\sqrt{3}), (4,-2), (4,2), (9,3)$
- f) Ten zbiór nie ma żadnych elementów

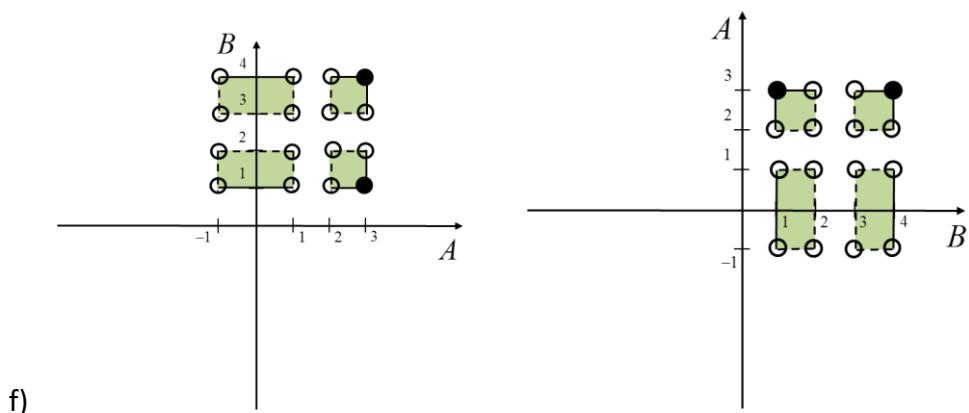
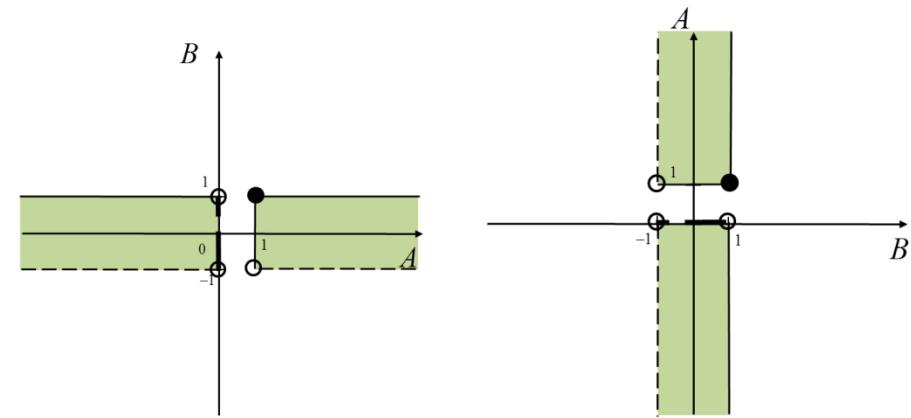
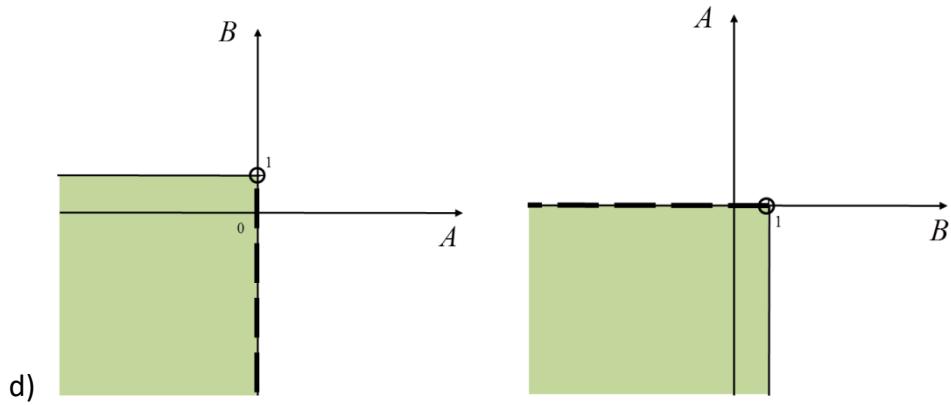
**Zad. 4**

	<i>a</i>	<i>b</i>	<i>c</i>
1	o	o	o
2	o	o	o
3	o	o	o
4	o	o	o

**Zad. 5**

- $\{(a,(a,c)),(a,(a,d)),(a,(a,e)),(a,(b,c)),(a,(b,d)),(a,(b,e)),$
- a)  $(b,(a,c)),(b,(a,d)),(b,(a,e)),(b,(b,c)),(b,(b,d)),(b,(b,e)),$   
 $(c,(a,c)),(c,(a,d)),(c,(a,e)),(c,(b,c)),(c,(b,d)),(c,(b,e))\}$
  - b)  $\{((a,a),c),((a,a),d),((a,a),e),((a,b),c),((a,b),d),((a,b),e),$   
 $((b,a),c),((b,a),d),((b,a),e),((b,b),c),((b,b),d),((b,b),e),$   
 $((c,a),c),((c,a),d),((c,a),e),((c,b),c),((c,b),d),((c,b),e)\}$
  - c)  $\{(a,a,c),(a,a,d),(a,a,e),(a,b,c),(a,b,d),(a,b,e),$   
 $(b,a,c),(b,a,d),(b,a,e),(b,b,c),(b,b,d),(b,b,e),$   
 $(c,a,c),(c,a,d),(c,a,e),(c,b,c),(c,b,d),(c,b,e)\}$
  - d)  $\{(a,c),(a,d),(a,e),(b,c),(b,d),(b,e),(c,c),(c,d),(c,e)\}$
  - e)  $\{(a,a,c),(a,a,d),(a,a,e),(a,b,c),(a,b,d),(a,b,e),(a,c,c),(a,c,d),(a,c,e),$   
 $(b,a,c),(b,a,d),(b,a,e),(b,b,c),(b,b,d),(b,b,e),(b,c,c),(b,c,d),(b,c,e)\}$

**Zad. 6**




KONIEC