

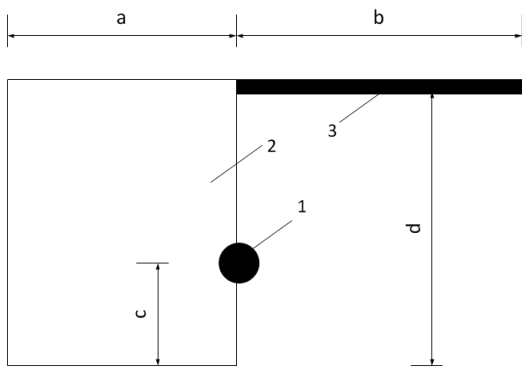
MECHANIKA I – LISTA ZADAŃ Z GEOMETRII MAS

Dla układów (pokazanych jak na rysunku poniżej) wyznaczyć:

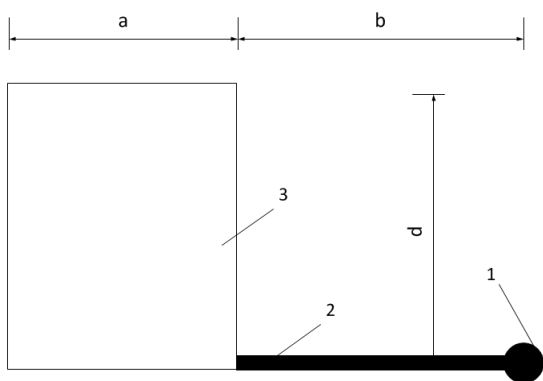
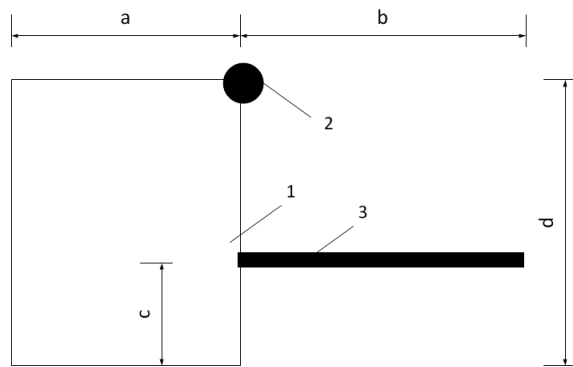
- położenie środka ciężkości,
- wartości centralnych momentów bezwładności i dewiacji,
- wartości głównych, centralnych momentów bezwładności,
- położenie głównych osi bezwładności (kąt odchylenia).

Wymiary do poszczególnych zadań są podane w tabeli 1.

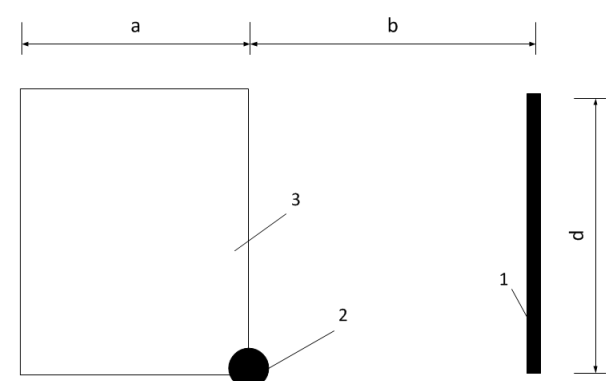
ZADANIE 1



ZADANIE 2

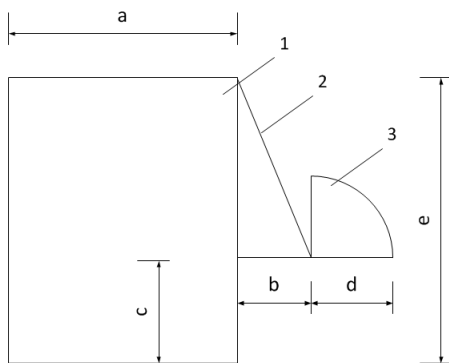


ZADANIE 3

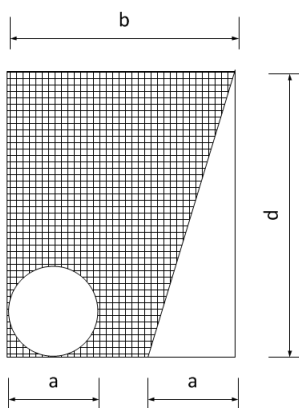
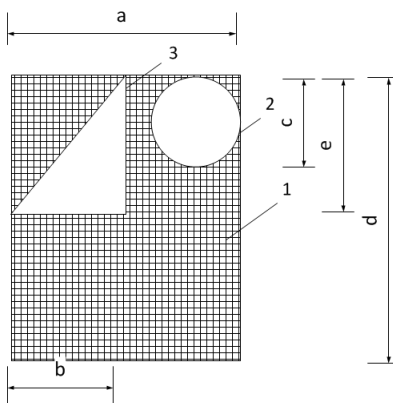


ZADANIE 4

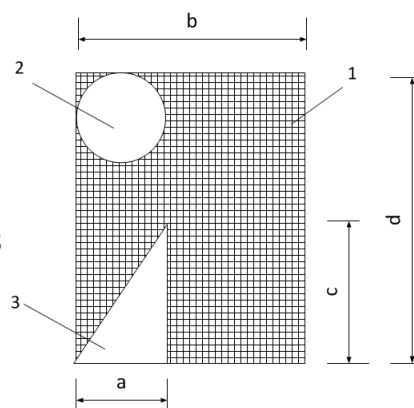
ZADANIE 5



ZADANIE 6

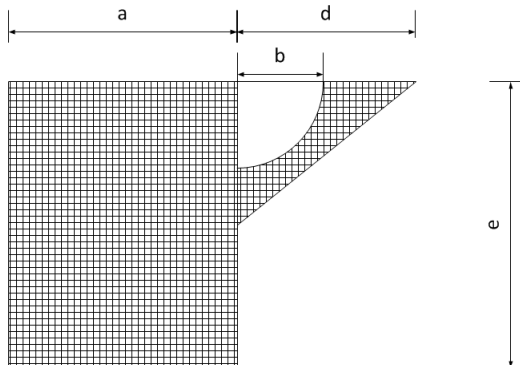


ZADANIE 7

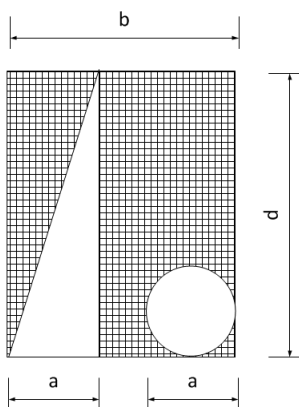
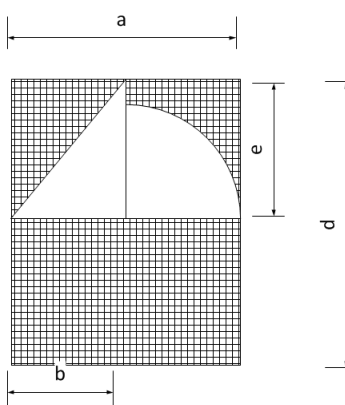


ZADANIE 8

ZADANIE 9

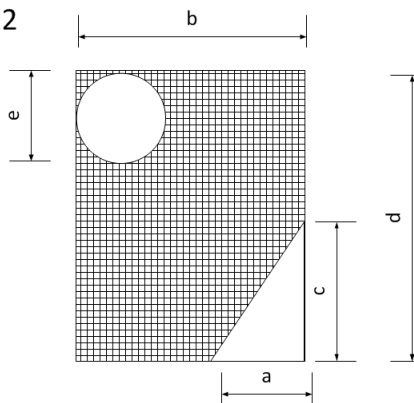


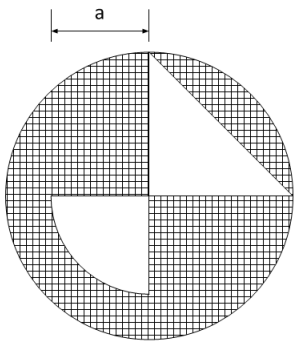
ZADANIE 10



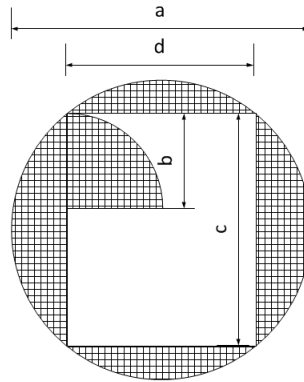
ZADANIE 11

ZADANIE 12

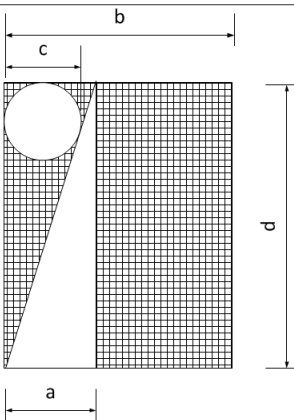




ZADANIE 13

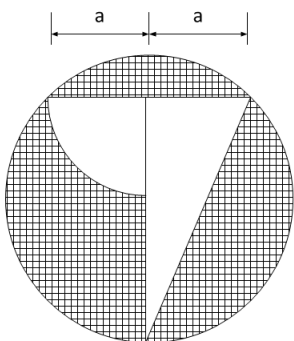
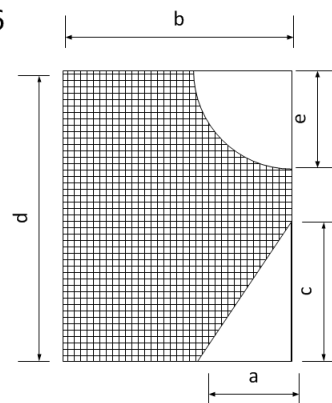


ZADANIE 14

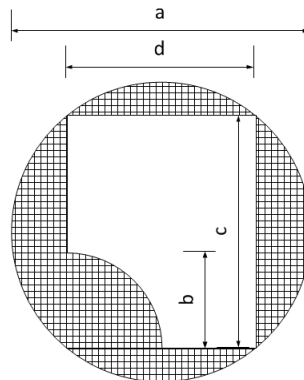


ZADANIE 15

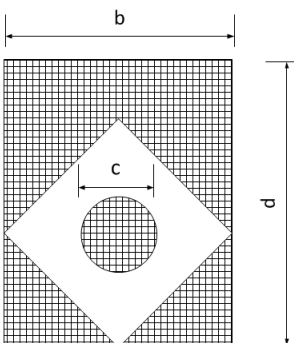
ZADANIE 16



ZADANIE 17

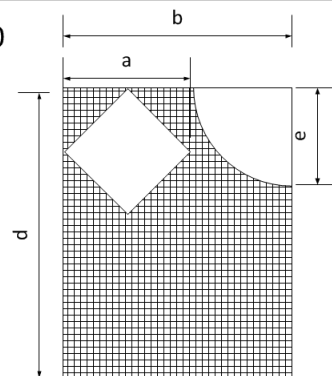


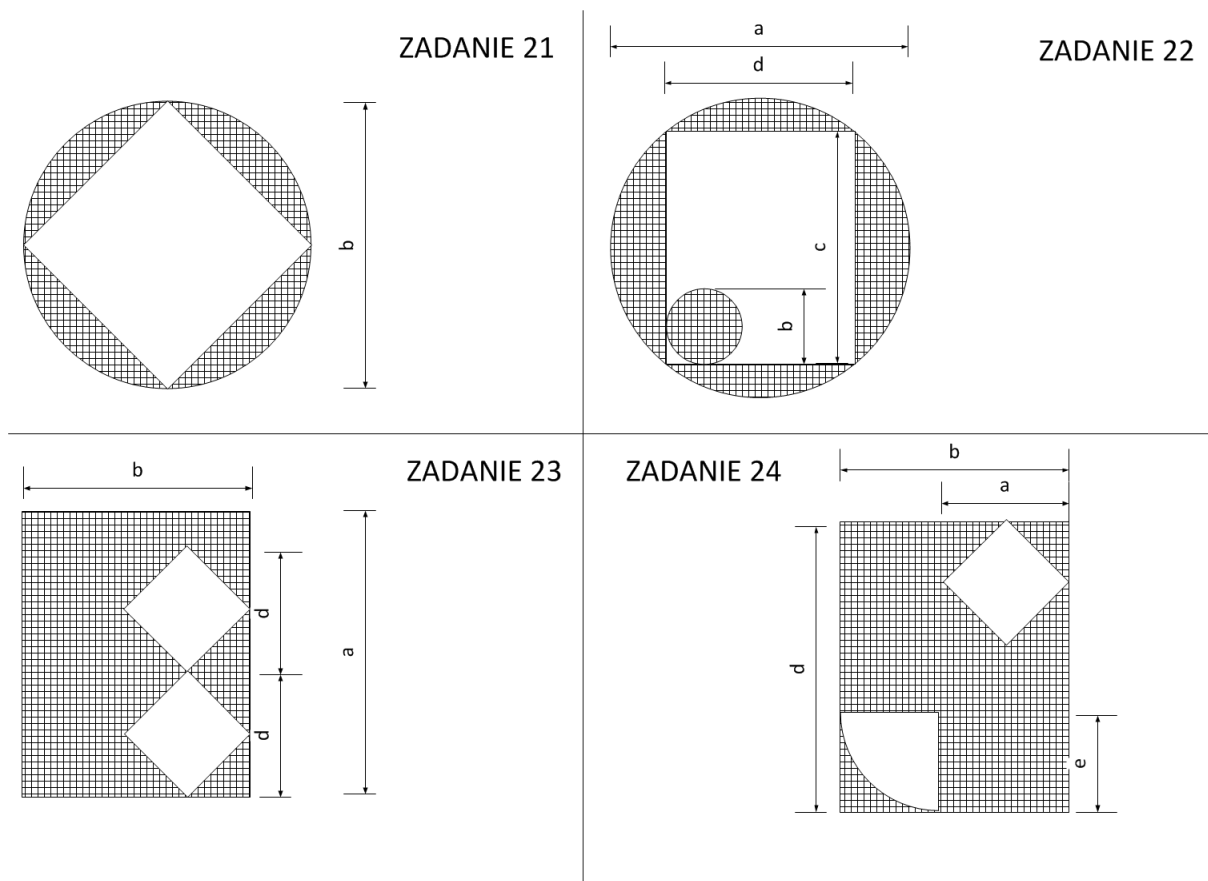
ZADANIE 18



ZADANIE 19

ZADANIE 20





Tab.1. Dane do obliczeń numerycznych

Lp.	a [cm]	b [cm]	c [cm]	d [cm]	e [cm]	m ₁ [kg]	m ₂ [kg]	m ₃ [kg]	UWAGI
1	20	30	10	40	-	25	30	35	
2	30	30	5	35	-	35	30	45	
3	25	45	-	50	-	10	50	60	
4	65	60	-	75	-	10	20	30	
5	40	10	15	15	60	-	-	-	$\gamma=150\text{kg/m}^2$
6	40	10	10	65	15	-	-	-	$\gamma=200\text{kg/m}^2$
7	15	35	-	70	-	-	-	-	$\gamma=200\text{kg/m}^2$
8	15	40	20	60	-	-	-	-	$\gamma=250\text{kg/m}^2$
9	45	15	-	35	65	-	-	-	$\gamma=50\text{kg/m}^2$
10	65	35	-	80	30	-	-	-	$\gamma=25\text{kg/m}^2$
11	15	40	-	65	-	-	-	-	$\gamma=75\text{kg/m}^2$
12	20	65	35	100	15	-	-	-	$\gamma=50\text{kg/m}^2$
13	15	80	-	-	-	-	-	-	$\gamma=50\text{kg/m}^2$
14	80	10	50	-	-	-	-	-	$\gamma=250\text{kg/m}^2$
15	15	35	10	60	-	-	-	-	$\gamma=100\text{kg/m}^2$
16	10	45	20	80	20	-	-	-	$\gamma=120\text{kg/m}^2$
17	15	60	40	-	-	-	-	-	$\gamma=130\text{kg/m}^2$
18	90	15	-	60	-	-	-	-	$\gamma=450\text{kg/m}^2$
19	60	75	10	-	-	-	-	-	$\gamma=40\text{kg/m}^2$
20	60	120	-	150	40	-	-	-	$\gamma=50\text{kg/m}^2$
21	-	150	-	-	-	-	-	-	$\gamma=50\text{kg/m}^2$
22	120	15	90	-	-	-	-	-	$\gamma=50\text{kg/m}^2$

23	45	20	-	10	-	-	-	-	$\gamma=150\text{kg/m}^2$
24	15	45	-	80	20	-	-	-	$\gamma=150\text{kg/m}^2$

Numer na liście odpowiada numerowi zadania. Prace proszę oddawać na kartkach A-4 wraz ze wszystkimi obliczeniami i wzorami z których Państwo korzystali.

Prowadzący:

Grzegorz Lesiuk

(Grzegorz.Lesiuk@pwr.wroc.pl)

p.110/11 B1