

Lucrare grafică și de calcul Nr.1

Partea 2

[Iablonski K.3]. Mișcarea plan-paralelă a unui mecanism

Condiția generală:

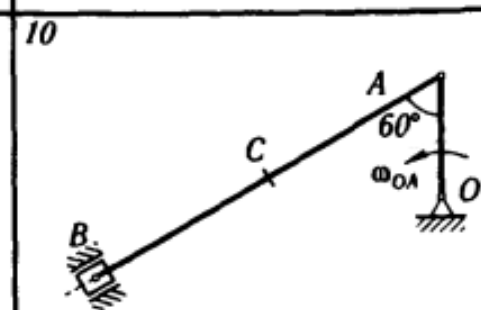
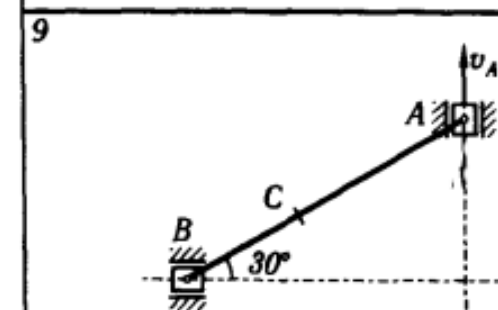
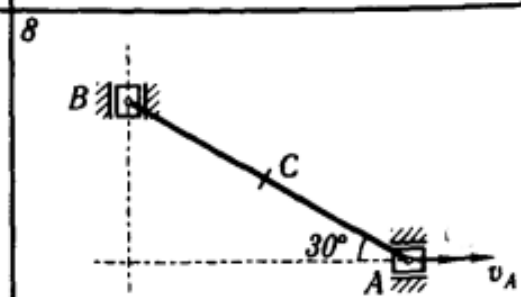
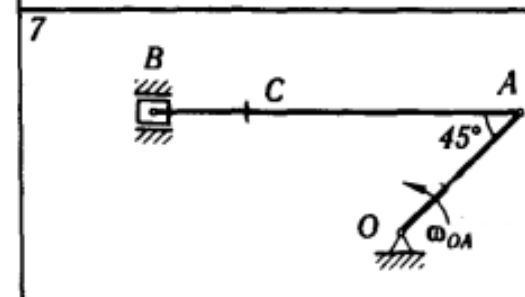
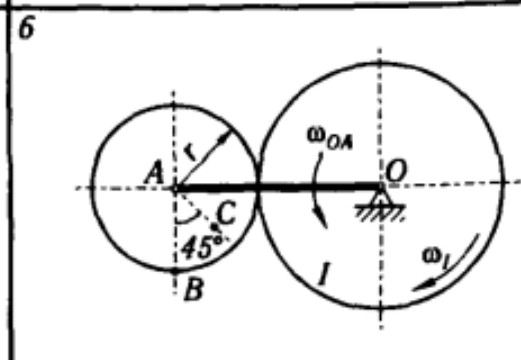
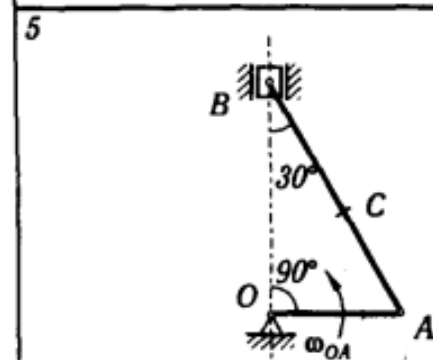
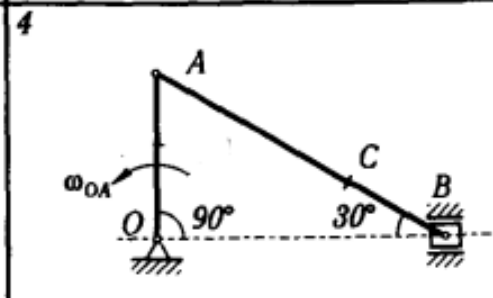
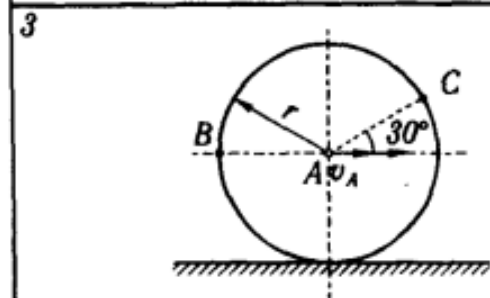
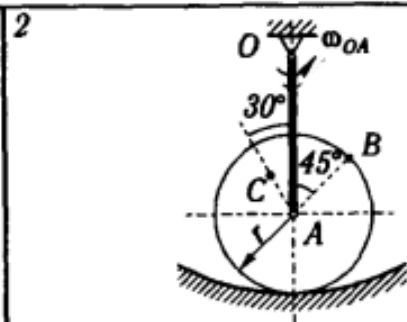
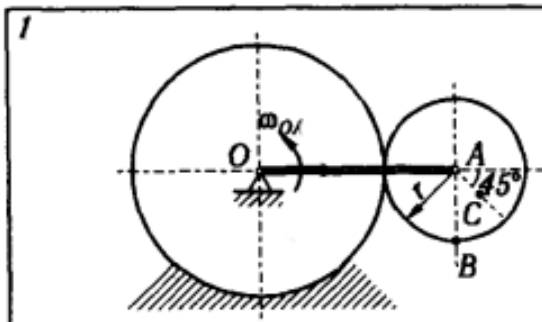
Mecanismul prezentat în desen realizează mișcare plan-paralelă. Rostogolirea este fără alunecare (pentru variantele în care este rostogolire).

Notă: ω_{OA} – viteza unghiulară a manivelei OA la o poziție dată a mecanismului;
 ω_I - viteza unghiulară a roții I (constantă); v_A – viteza punctului A.

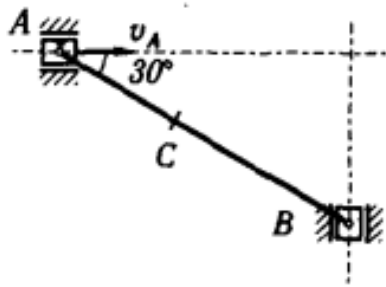
Desenele schematice al mecanismelor sunt prezentate mai jos, iar datele numerice necesare le găsiți în tabel. Varianta se indică de către profesor. Fiecare rând din tabel corespunde desenului cu același număr (*de ex. Varianta 3 va rezolva desenul 3 cu condiția din rândul 3*). Studentul rezolvă problema în caiet și o prezintă în timpul laboratorului, în data indicată de către profesor.

- 1. Indicați pe desen vectorii vitezelor punctelor B și C, centrele instantanee ale vitezelor și vitezele unghiulare.**
- 2. Calculați vitezele punctelor B și C, precum și vitezele unghiulare ale elementelor mecanismului.**

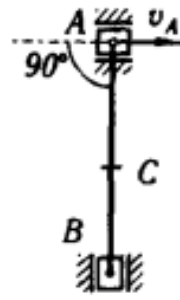
Nr. Variantei	Dimensiuni, <i>cm</i>				ω_{OA} , <i>rad/s</i>	ω_I , <i>rad/s</i>	v_A , <i>cm/s</i>
	<i>OA</i>	<i>r</i>	<i>AB</i>	<i>AC</i>			
1	40	15	-	8	2	-	-
2	30	15	-	8	3	-	-
3	-	50	-	-	-	-	50
4	35	-	-	45	4	-	-
5	25	-	-	20	1	-	-
6	40	15	-	6	1	1	-
7	35	-	75	60	5	-	-
8	-	-	20	10	-	-	40
9	-	-	45	30	-	-	20
10	25	-	80	20	1	-	-
11	-	-	30	15	-	-	10
12	-	-	30	20	-	-	20
13	25	-	55	40	2	-	-
14	45	15	-	8	3	12	-
15	40	15	-	8	1	-	-
16	55	20	-	-	2	-	-
17	-	30	-	10	-	-	80
18	10	-	10	5	2	-	-
19	20	15	-	10	1	2,5	-
20	-	-	20	6	-	-	10
21	30	-	60	15	3	-	-
22	35	-	60	40	4	-	-
23	-	-	60	20	-	-	5
24	25	-	35	15	2	-	-
25	20	-	70	20	1	-	-
26	20	15	-	10	2	1,2	-
27	-	15	-	5	-	-	60
28	20	-	50	25	1	-	-
29	12	-	35	15	4	-	-
30	40	-	-	20	5	-	-



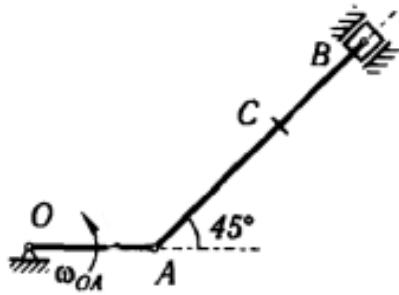
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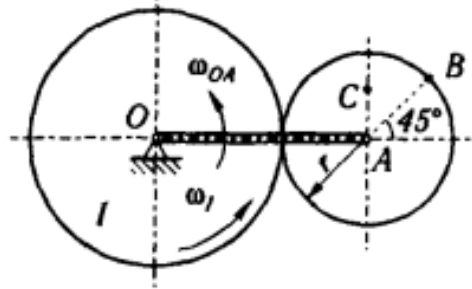
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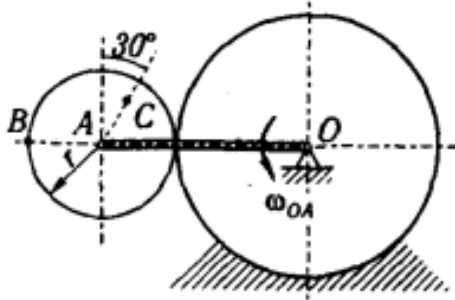
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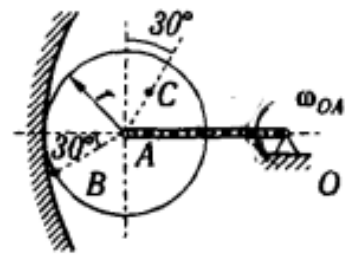
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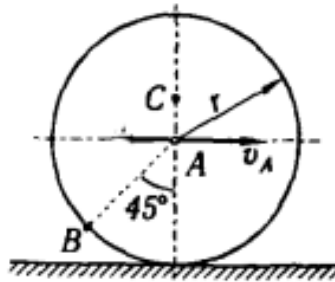
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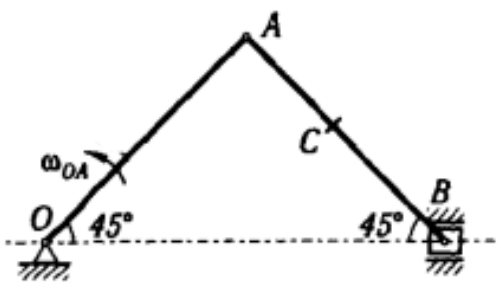
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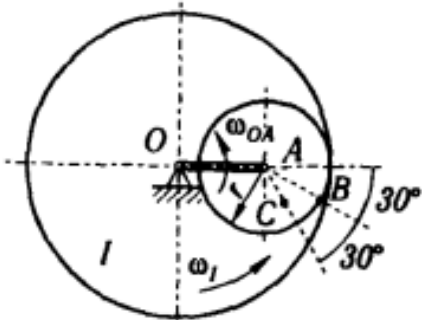
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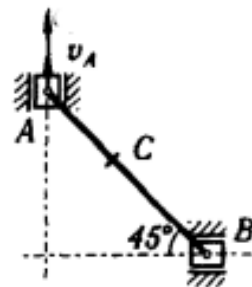
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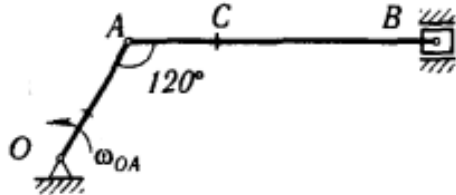
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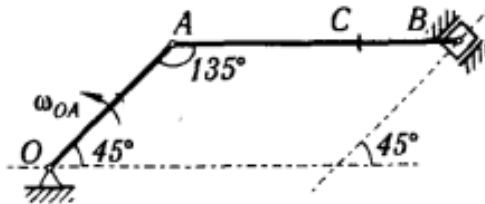
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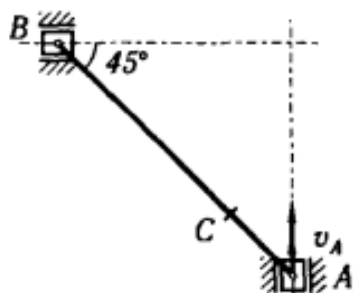
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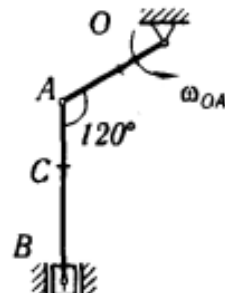
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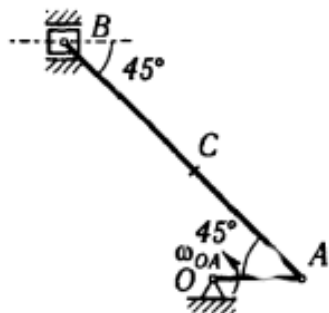
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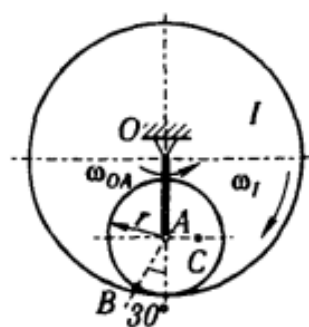
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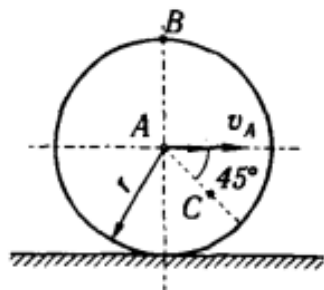
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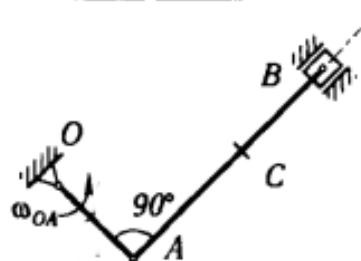
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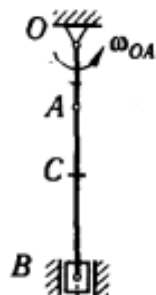
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