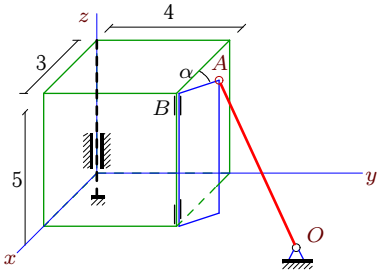
Шарнирный механизм с цилиндрическим шарниром

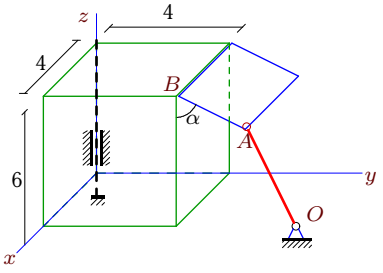
Прямоугольная пластина прикреплена цилиндрическим шарниром к параллелепипеду, вращающемуся с заданной угловой скоростью вокруг оси z или y, и к стержню OA со сферическими шарнирами по концам. Размеры и координаты опоры O даны в сантиметрах. Найти скорость шарнира A в заданном положении механизма.

Задача К-35.1. 4



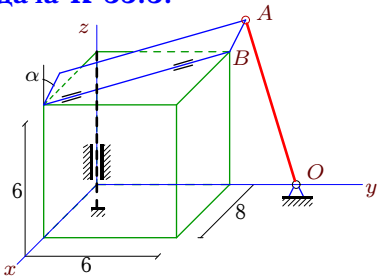
$\omega_z = -23$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.8$, $O(4, 9, 0)$.

Задача К-35.2. 4



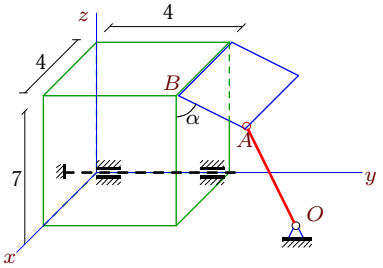
$\omega_z = 75$ с$^{-1}$, $AB = 4$, $\cos\alpha = 0.6$, $O(1, 7, 0)$.

Задача К-35.3. 4



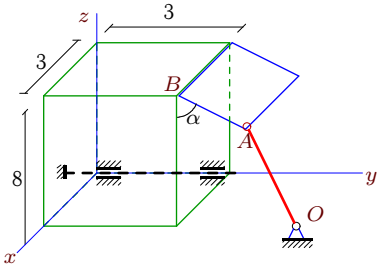
$\omega_z = 15$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(0, 8, 0)$.

Задача К-35.4. 4



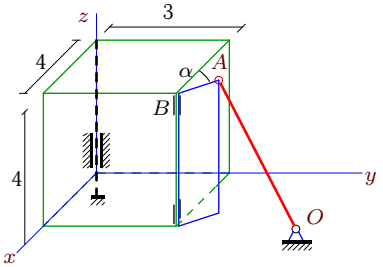
$\omega_y = 125$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.6$, $O(2, 5, 0)$.

Задача К-35.5. 4



$\omega_y = 25$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.8$, $O(6, 4, 0)$.

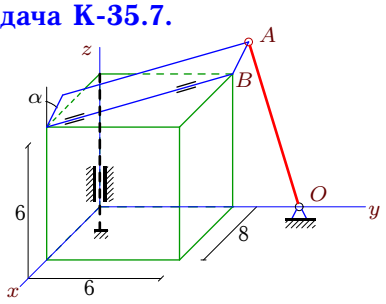
Задача К-35.6. 4



$\omega_z = -65$ с$^{-1}$, $AB = 1$, $\cos\alpha = 0.8$, $O(3, 7, 0)$.

Задача К-35.7.

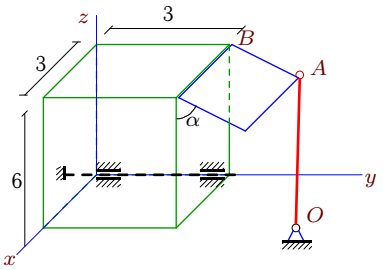
4



$\omega_z = 15$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(0, 8, 0)$.

Задача К-35.8.

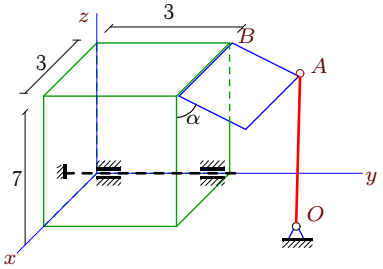
4



$\omega_y = 5$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.6$, $O(6, 5, 0)$.

Задача К-35.9.

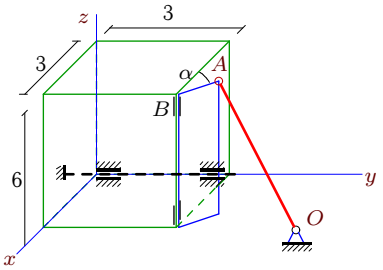
4



$\omega_y = 25$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.8$, $O(4, 7, 0)$.

Задача К-35.10.

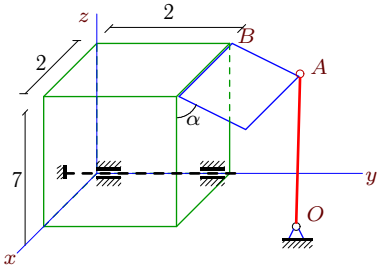
4



$\omega_y = -10$ с$^{-1}$, $AB = 1$, $\cos\alpha = 0.8$, $O(3, 6, 0)$.

Задача К-35.11.

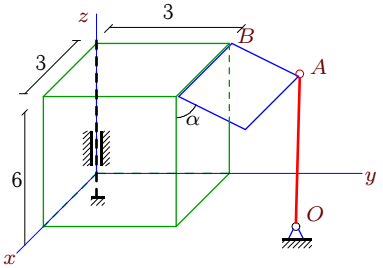
4



$\omega_y = 65$ с$^{-1}$, $AB = 4$, $\cos\alpha = 0.6$, $O(3, 7, 0)$.

Задача К-35.12.

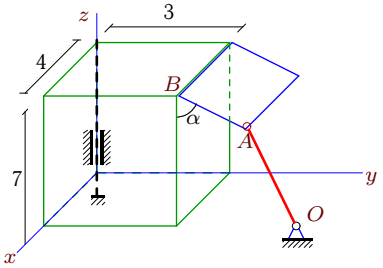
4



$\omega_z = 10$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.8$, $O(1, 7, 0)$.

Задача К-35.13.

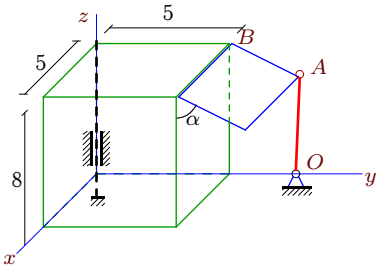
4



$\omega_z = 5$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.6$, $O(4, 7, 0)$.

Задача К-35.14.

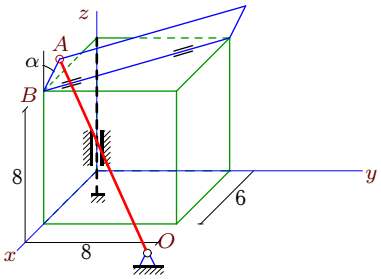
4



$\omega_z = 10$ с$^{-1}$, $AB = 4$, $\cos\alpha = 0.8$, $O(0, 10, 0)$.

Задача К-35.15.

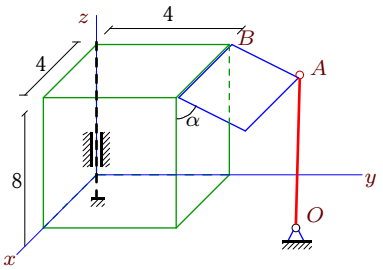
4



$\omega_z = 305$ с$^{-1}$, $AB = 5$, $\cos\alpha = 0.6$, $O(7, 8, 0)$.

Задача К-35.16.

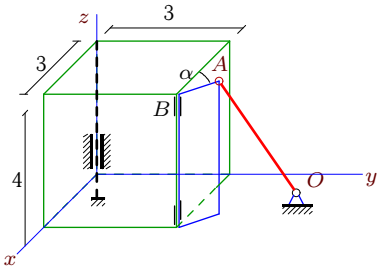
4



$\omega_z = 25$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(2, 8, 0)$.

Задача К-35.17.

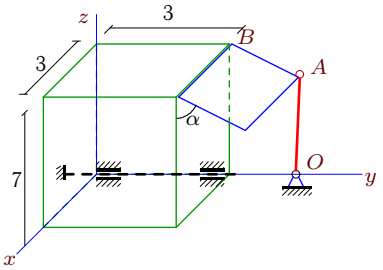
4



$\omega_z = -10$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.8$, $O(1, 6, 0)$.

Задача К-35.18.

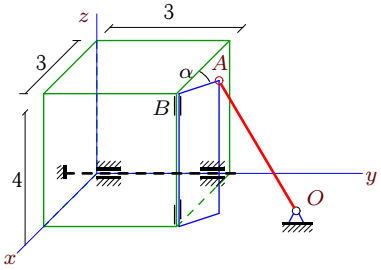
4



$\omega_y = 5$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(0, 7, 0)$.

Задача К-35.19.

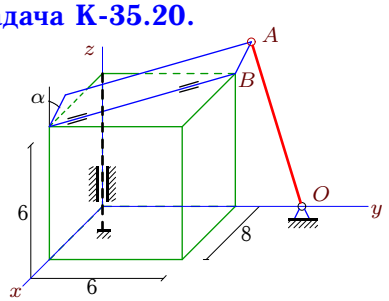
4



$\omega_y = -65$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.8$, $O(2, 7, 0)$.

Задача К-35.20.

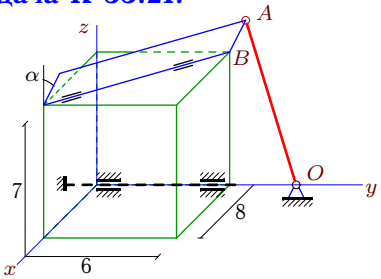
4



$\omega_z = 15$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(0, 8, 0)$.

Задача К-35.21.

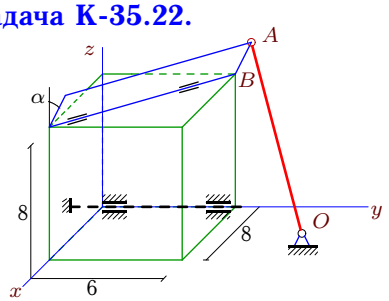
4



$\omega_y = 235$ с$^{-1}$, $AB = 5$, $\cos\alpha = 0.6$, $O(0, 10, 0)$.

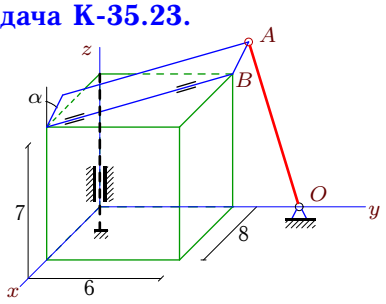
Задача К-35.22.

4



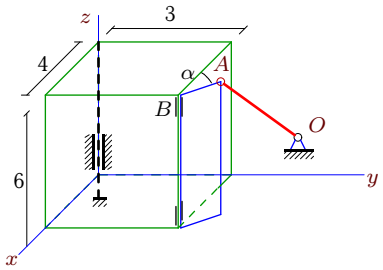
$\omega_y = 1145$ с$^{-1}$, $AB = 5$, $\cos\alpha = 0.6$, $O(1, 11, 0)$.

Задача К-35.23. 4



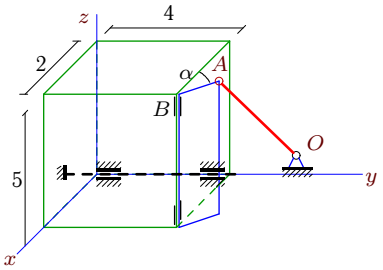
$\omega_z = 205$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(0, 8, 0)$.

Задача К-35.24. 4



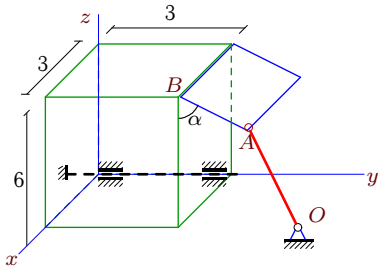
$\omega_z = 1$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.6$, $O(-2, 7, 0)$.

Задача К-35.25. 4



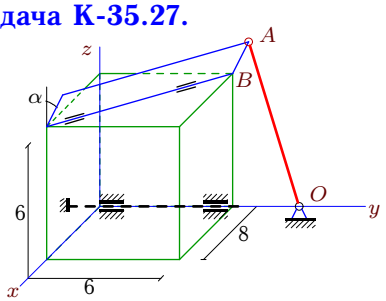
$\omega_y = 5$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.8$, $O(-1, 6, 0)$.

Задача К-35.26. 4



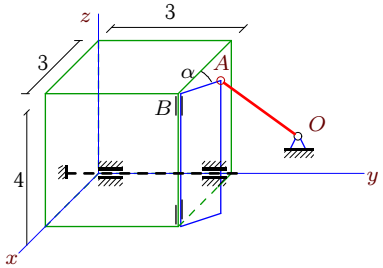
$\omega_y = 10$ с$^{-1}$, $AB = 4$, $\cos\alpha = 0.6$, $O(1, 7, 0)$.

Задача К-35.27. 4



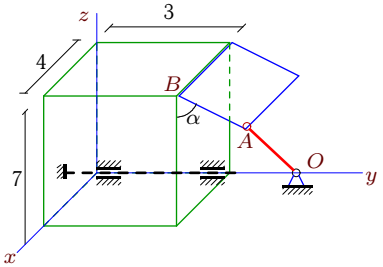
$\omega_y = 65$ с$^{-1}$, $AB = 5$, $\cos\alpha = 0.6$, $O(0, 9, 0)$.

Задача К-35.28. 4



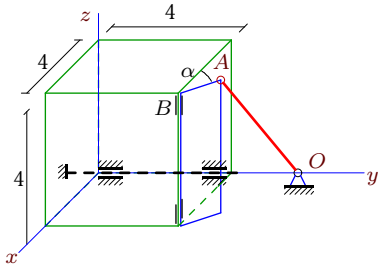
$\omega_y = -5$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.8$, $O(-2, 7, 0)$.

Задача К-35.29. 4



$\omega_y = 65$ с$^{-1}$, $AB = 3$, $\cos\alpha = 0.6$, $O(0, 8, 0)$.

Задача К-35.30. 4



$\omega_y = 5$ с$^{-1}$, $AB = 2$, $\cos\alpha = 0.8$, $O(0, 6, 0)$.

Ответы.

Шарнирный механизм с цилиндрическим шарниром 23.02.2014

№	v_{Ax}	v_{Ay}	v_{Az}
1	80	-85	0
2	-540	612	416
3	-156	12	40
4	725	174	-268
5	160	192	69
6	408	24	0
7	-156	12	40
8	24	24	12
9	115	368	176
10	-15	60	22
11	299	207	81
12	-48	354	243
13	-23	29	12
14	-74	330	225
15	-1584	2167	1420
16	-160	117	56
17	63	14	0
18	26	0	-15
19	-140	160	39
20	-156	12	40
21	2350	0	-564
22	12100	-660	-1648
23	-2102	204	480
24	5	10	0
25	-50	-100	-2
26	36	9	-18
27	585	0	-156
28	-140	-160	7
29	338	0	-260
30	20	0	-12

K-35 файл o35k4A