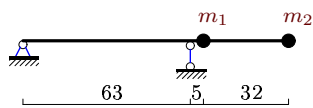


Колебание грузов

Найти вероятность того, что высшая частота колебаний грузов на упругой балке попадет в указанный интервал при заданном изменении массы m_2 . Принять жесткость балки на изгиб $EJ = 1000 \text{ Нм}^2$. Размеры даны в сантиметрах.

Задача L-14.1.

2



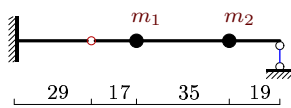
$$m_1 = 10 \text{ кг,}$$

$$9 < m_2 < 13.5 \text{ кг.}$$

$$802.403 < \omega < 803.292$$

Задача L-14.2.

2



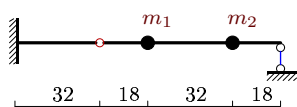
$$m_1 = 6 \text{ кг,}$$

$$12 < m_2 < 18 \text{ кг.}$$

$$246.886 < \omega < 261.110$$

Задача L-14.3.

2



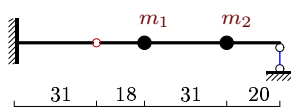
$$m_1 = 6 \text{ кг,}$$

$$13 < m_2 < 19.5 \text{ кг.}$$

$$250.404 < \omega < 267.045$$

Задача L-14.4.

2



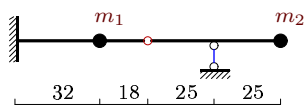
$$m_1 = 4 \text{ кг,}$$

$$6 < m_2 < 11.5 \text{ кг.}$$

$$323.230 < \omega < 350.185$$

Задача L-14.5.

2



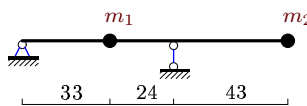
$$m_1 = 9 \text{ кг,}$$

$$10 < m_2 < 17.5 \text{ кг.}$$

$$196.399 < \omega < 200.240$$

Задача L-14.6.

2



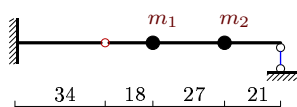
$$m_1 = 9 \text{ кг,}$$

$$7 < m_2 < 14.5 \text{ кг.}$$

$$218.527 < \omega < 219.499$$

Задача L-14.7.

2



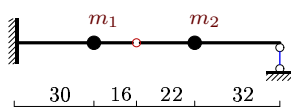
$$m_1 = 13 \text{ кг,}$$

$$12 < m_2 < 17 \text{ кг.}$$

$$221.261 < \omega < 240.413$$

Задача L-14.8.

2



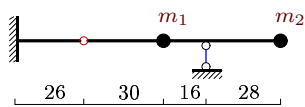
$$m_1 = 13 \text{ кг,}$$

$$8 < m_2 < 12.5 \text{ кг.}$$

$$215.315 < \omega < 229.126$$

Задача L-14.9.

2



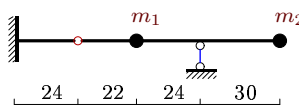
$$m_1 = 7 \text{ кг,}$$

$$12 < m_2 < 19.5 \text{ кг.}$$

$$342.522 < \omega < 344.055$$

Задача L-14.10.

2



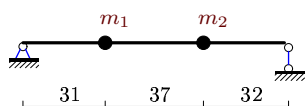
$$m_1 = 6 \text{ кг,}$$

$$4 < m_2 < 11 \text{ кг.}$$

$$290.137 < \omega < 293.392$$

Задача L-14.11.

2



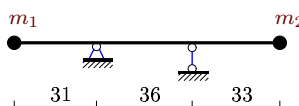
$$m_1 = 5 \text{ кг,}$$

$$6 < m_2 < 10.5 \text{ кг.}$$

$$263.724 < \omega < 278.912$$

Задача L-14.12.

2



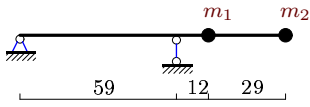
$$m_1 = 13 \text{ кг,}$$

$$12 < m_2 < 16.5 \text{ кг.}$$

$$65.812 < \omega < 68.188$$

Задача L-14.13.

2



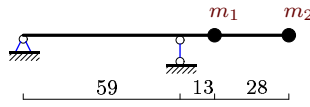
$$m_1 = 9 \text{ кг,}$$

$$4 < m_2 < 8 \text{ кг.}$$

$$415.225 < \omega < 419.902$$

Задача L-14.14.

2



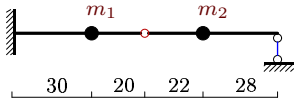
$$m_1 = 4 \text{ кг,}$$

$$11 < m_2 < 15 \text{ кг.}$$

$$576.564 < \omega < 577.726$$

Задача L-14.15.

2



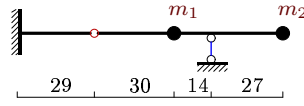
$$m_1 = 13 \text{ кг,}$$

$$8 < m_2 < 14.5 \text{ кг.}$$

$$214.154 < \omega < 230.833$$

Задача L-14.16.

2



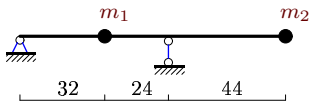
$$m_1 = 4 \text{ кг,}$$

$$10 < m_2 < 13.5 \text{ кг.}$$

$$494.252 < \omega < 495.245$$

Задача L-14.17.

2



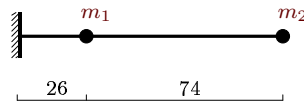
$$m_1 = 4 \text{ кг,}$$

$$7 < m_2 < 13 \text{ кг.}$$

$$331.030 < \omega < 331.534$$

Задача L-14.18.

2



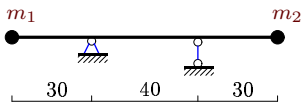
$$m_1 = 4 \text{ кг,}$$

$$12 < m_2 < 16.5 \text{ кг.}$$

$$289.007 < \omega < 289.089$$

Задача L-14.19.

2



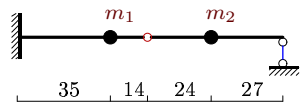
$$m_1 = 11 \text{ кг,}$$

$$5 < m_2 < 9 \text{ кг.}$$

$$88.145 < \omega < 99.317$$

Задача L-14.20.

2



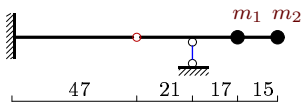
$$m_1 = 9 \text{ кг,}$$

$$11 < m_2 < 18 \text{ кг.}$$

$$212.257 < \omega < 227.137$$

Задача L-14.21.

2



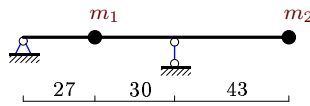
$$m_1 = 6 \text{ кг,}$$

$$4 < m_2 < 8.5 \text{ кг.}$$

$$570.385 < \omega < 590.612$$

Задача L-14.22.

2



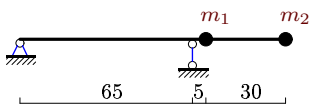
$$m_1 = 7 \text{ кг,}$$

$$5 < m_2 < 9.5 \text{ кг.}$$

$$234.303 < \omega < 235.107$$

Задача L-14.23.

2



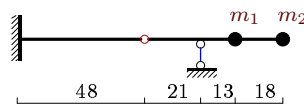
$$m_1 = 5 \text{ кг,}$$

$$6 < m_2 < 12 \text{ кг.}$$

$$1159.305 < \omega < 1160.728$$

Задача L-14.24.

2



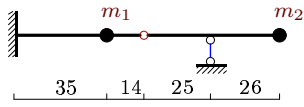
$$m_1 = 6 \text{ кг,}$$

$$7 < m_2 < 11 \text{ кг.}$$

$$576.346 < \omega < 583.606$$

Задача L-14.25.

2



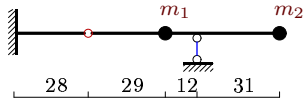
$$m_1 = 7 \text{ кг,}$$

$$9 < m_2 < 15.5 \text{ кг.}$$

$$203.501 < \omega < 207.667$$

Задача L-14.27.

2



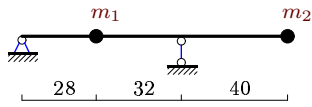
$$m_1 = 7 \text{ кг,}$$

$$9 < m_2 < 12.5 \text{ кг.}$$

$$425.175 < \omega < 426.108$$

Задача L-14.29.

2



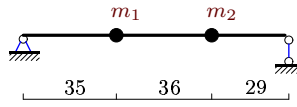
$$m_1 = 7 \text{ кг,}$$

$$9 < m_2 < 16.5 \text{ кг.}$$

$$218.914 < \omega < 219.648$$

Задача L-14.26.

2



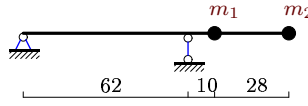
$$m_1 = 10 \text{ кг,}$$

$$7 < m_2 < 13 \text{ кг.}$$

$$207.794 < \omega < 230.972$$

Задача L-14.28.

2



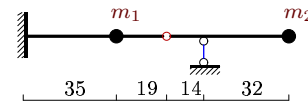
$$m_1 = 10 \text{ кг,}$$

$$9 < m_2 < 14.5 \text{ кг.}$$

$$458.267 < \omega < 460.782$$

Задача L-14.30.

2



$$m_1 = 8 \text{ кг,}$$

$$5 < m_2 < 8.5 \text{ кг.}$$

$$245.177 < \omega < 246.812$$

Отвeты.
Колeбание грузов

22-Jan-16

	δ_{11}	δ_{12}	δ_{22}	ω_1	ω_2	ω_1^*	$\Delta\omega$	P
	см ³			рад/с				
1	0.567	4.327	45.633	803.514	49.099	802.180	1.334	0.667
2	8.659	4.984	5.165	263.697	100.224	244.299	19.397	0.733
3	9.876	5.283	4.736	269.819	96.634	247.631	22.188	0.750
4	9.496	5.638	5.474	360.967	125.835	312.448	48.518	0.556
5	10.923	20.139	52.083	201.093	41.016	195.545	5.548	0.692
6	3.668	8.962	61.633	219.824	47.471	218.202	1.621	0.600
7	10.700	6.459	5.837	243.895	72.108	217.779	26.116	0.733
8	9.000	9.600	14.453	233.072	68.324	211.369	21.703	0.636
9	2.378	-4.941	21.509	344.333	61.276	342.244	2.090	0.733
10	3.275	-5.471	24.760	295.562	96.566	287.967	7.595	0.429
11	15.251	13.251	15.783	284.987	79.395	257.649	27.338	0.556
12	21.462	6.138	25.047	68.620	52.185	65.380	3.241	0.733
13	3.408	12.340	56.033	423.020	63.345	412.108	10.912	0.429
14	4.056	13.581	56.033	577.959	39.854	576.332	1.627	0.714
15	9.000	10.080	15.596	235.599	66.852	209.388	26.210	0.636
16	2.159	-4.766	20.314	495.466	69.387	494.031	1.434	0.692
17	3.511	8.850	64.533	331.702	46.794	330.862	0.841	0.600
18	5.859	30.871	333.333	289.105	15.789	288.992	0.113	0.733
19	21.000	6.000	21.000	104.903	63.871	82.559	22.345	0.500
20	14.292	12.106	13.736	230.112	61.918	209.281	20.832	0.714
21	26.340	50.304	98.450	604.096	42.675	556.901	47.195	0.429
22	3.837	8.555	61.633	235.509	56.166	233.901	1.608	0.500
23	0.583	4.208	40.833	1161.297	63.606	1158.736	2.562	0.556
24	16.042	38.762	96.989	586.510	35.984	573.442	13.068	0.556
25	14.292	23.781	53.908	208.708	42.173	202.460	6.248	0.667
26	17.252	13.422	14.132	238.698	62.759	200.069	38.629	0.600
27	1.611	-4.689	27.247	426.341	63.119	424.942	1.399	0.667
28	2.400	9.587	48.133	461.411	47.010	457.638	3.773	0.667
29	4.460	8.761	53.333	219.831	45.151	218.731	1.101	0.667
30	14.292	59.267	289.924	247.630	25.419	244.359	3.271	0.500

L-14 файл o14L2A