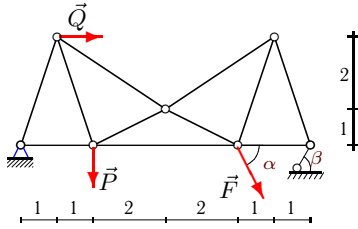


Расчет фермы

Кирсанов М.Н. Решбник. Теоретическая механика с. 45.

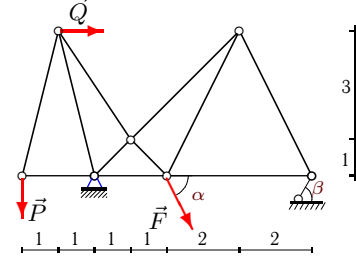
<p>Вариант 1</p> <p>C6. $P = 10\text{кН}$, $F = 1\text{кН}$, $\alpha = 40^\circ$, $\beta = 30^\circ$, $Q = 60\text{кН}$.</p>	<p>Вариант 2</p> <p>C6. $P = 30\text{кН}$, $F = 2\text{кН}$, $\alpha = 60^\circ$, $\beta = 45^\circ$, $Q = 20\text{кН}$.</p>
<p>Вариант 3</p> <p>C6. $P = 25\text{кН}$, $F = 3\text{кН}$, $\alpha = 55^\circ$, $\beta = 45^\circ$, $Q = 20\text{кН}$.</p>	<p>Вариант 4</p> <p>C6. $P = 20\text{кН}$, $F = 4\text{кН}$, $\alpha = 50^\circ$, $\beta = 45^\circ$, $Q = 50\text{кН}$.</p>
<p>Вариант 5</p> <p>C6. $P = 25\text{кН}$, $F = 5\text{кН}$, $\alpha = 55^\circ$, $\beta = 45^\circ$, $Q = 60\text{кН}$.</p>	<p>Вариант 6</p> <p>C6. $P = 40\text{кН}$, $F = 6\text{кН}$, $\alpha = 70^\circ$, $\beta = 60^\circ$, $Q = 20\text{кН}$.</p>
<p>Вариант 7</p> <p>C6. $P = 45\text{кН}$, $F = 7\text{кН}$, $\alpha = 75^\circ$, $\beta = 60^\circ$, $Q = 10\text{кН}$.</p>	<p>Вариант 8</p> <p>C6. $P = 25\text{кН}$, $F = 8\text{кН}$, $\alpha = 55^\circ$, $\beta = 45^\circ$, $Q = 10\text{кН}$.</p>
<p>Вариант 9</p> <p>C6. $P = 10\text{кН}$, $F = 9\text{кН}$, $\alpha = 40^\circ$, $\beta = 30^\circ$, $Q = 20\text{кН}$.</p>	<p>Вариант 10</p> <p>C6. $P = 45\text{кН}$, $F = 10\text{кН}$, $\alpha = 75^\circ$, $\beta = 60^\circ$, $Q = 10\text{кН}$.</p>

Вариант 11



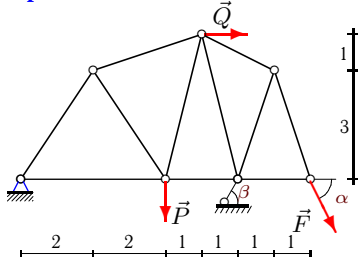
C6.
 $P = 35\text{кН}$,
 $F = 11\text{кН}$,
 $\alpha = 65^\circ$,
 $\beta = 45^\circ$,
 $Q = 20\text{кН}$.

Вариант 12



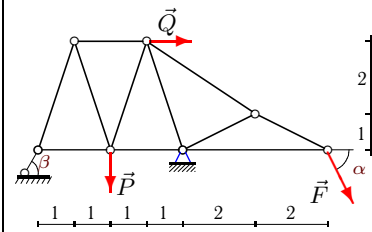
C6.
 $P = 20\text{кН}$,
 $F = 12\text{кН}$,
 $\alpha = 50^\circ$,
 $\beta = 45^\circ$,
 $Q = 40\text{кН}$.

Вариант 13



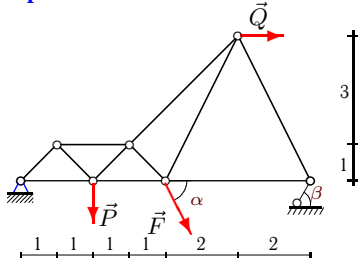
C6.
 $P = 30\text{кН}$,
 $F = 13\text{кН}$,
 $\alpha = 60^\circ$,
 $\beta = 45^\circ$,
 $Q = 10\text{кН}$.

Вариант 14



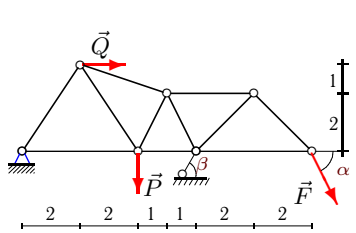
C6.
 $P = 15\text{кН}$,
 $F = 14\text{кН}$,
 $\alpha = 45^\circ$,
 $\beta = 30^\circ$,
 $Q = 40\text{кН}$.

Вариант 15



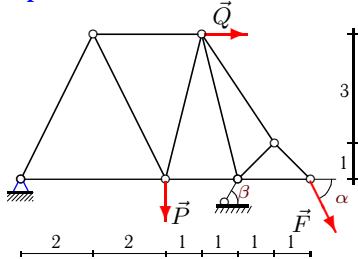
C6.
 $P = 10\text{кН}$,
 $F = 15\text{кН}$,
 $\alpha = 40^\circ$,
 $\beta = 30^\circ$,
 $Q = 40\text{кН}$.

Вариант 16



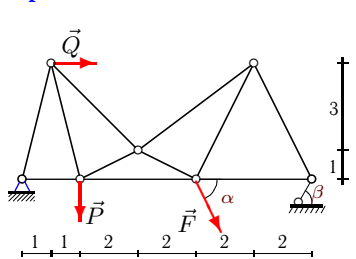
C6.
 $P = 30\text{кН}$,
 $F = 16\text{кН}$,
 $\alpha = 60^\circ$,
 $\beta = 45^\circ$,
 $Q = 50\text{кН}$.

Вариант 17



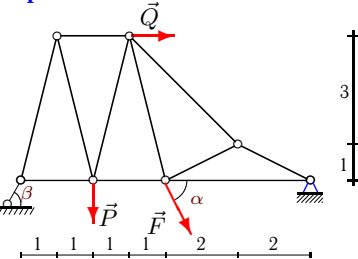
C6.
 $P = 10\text{кН}$,
 $F = 17\text{кН}$,
 $\alpha = 40^\circ$,
 $\beta = 30^\circ$,
 $Q = 10\text{кН}$.

Вариант 18



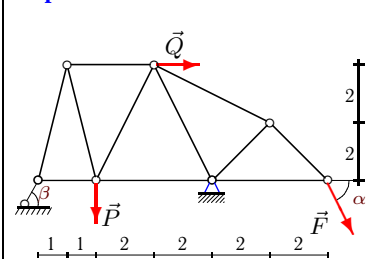
C6.
 $P = 40\text{кН}$,
 $F = 18\text{кН}$,
 $\alpha = 70^\circ$,
 $\beta = 60^\circ$,
 $Q = 60\text{кН}$.

Вариант 19

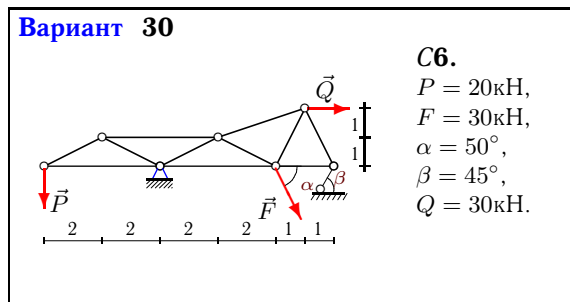
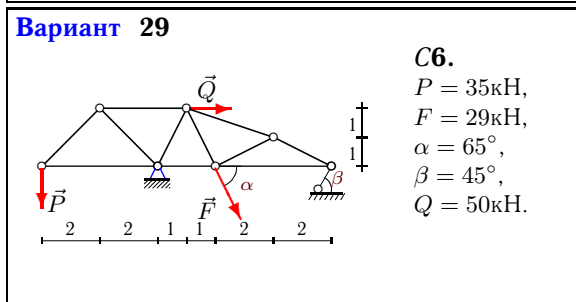
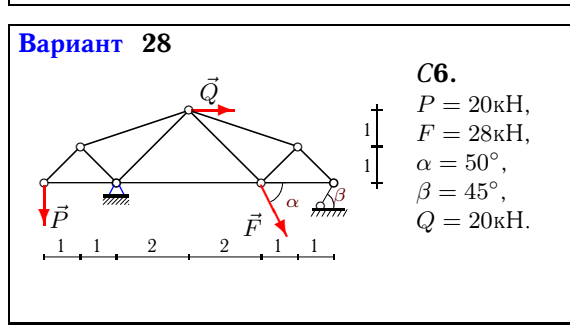
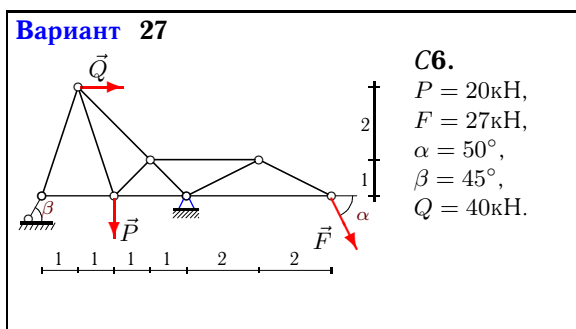
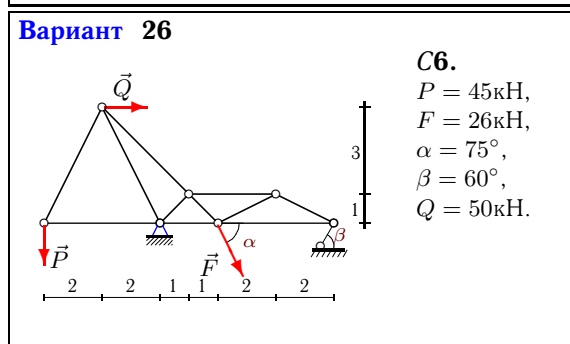
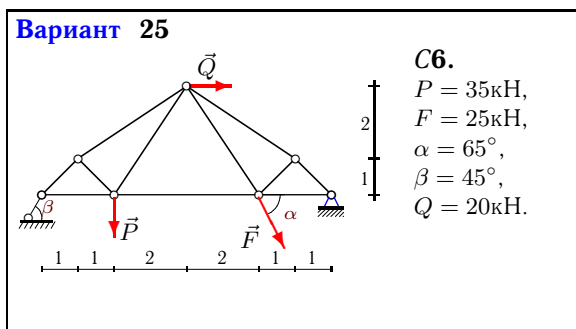
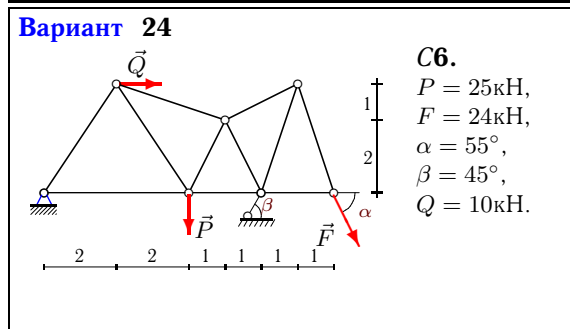
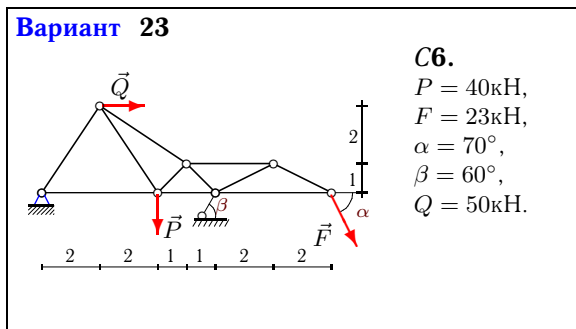
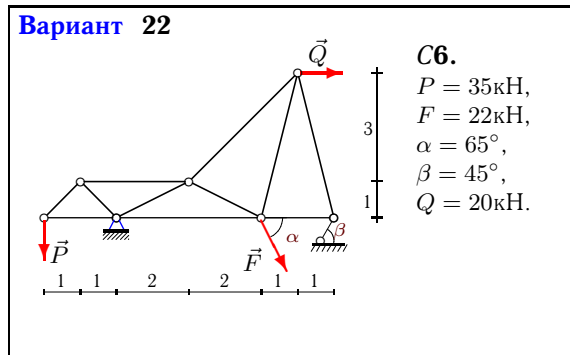
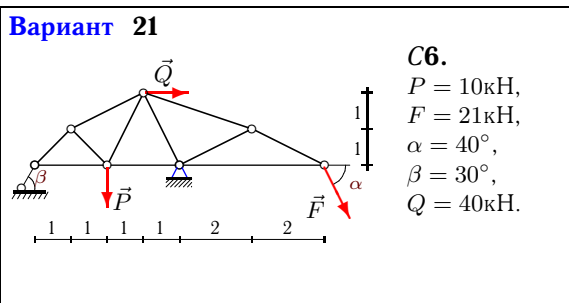


C6.
 $P = 5\text{кН}$,
 $F = 19\text{кН}$,
 $\alpha = 35^\circ$,
 $\beta = 30^\circ$,
 $Q = 40\text{кН}$.

Вариант 20



C6.
 $P = 10\text{кН}$,
 $F = 20\text{кН}$,
 $\alpha = 40^\circ$,
 $\beta = 30^\circ$,
 $Q = 60\text{кН}$.



Ответы

	X_A	Y_A	R_B	U_1	U_2	U_3	O_1	O_2	O_3	O_4	D_1	D_2	D_3	D_4
1	-108.954	-17.179	55.643	-10.000	90.365	103.831	14.142	14.142	-55.643	-62.211	-0.000	19.206	6.940	-12.442
2	-54.911	-2.179	47.957	-15.000	-60.000	-57.089	33.541	30.000	3.445	3.081	-33.541	-5.531	3.990	-1.541
3	-30.902	18.277	12.984	-4.590	-2.457	-0.737	-10.265	-36.911	4.915	3.475	23.315	9.273	-35.373	-3.475
4	-50.797	24.839	-2.509	0.591	12.339	-34.238	2.132	-64.557	-44.884	-29.852	22.403	1.520	-40.213	46.911
5	-66.166	25.798	4.664	-8.333	-34.433	-53.267	26.352	16.667	40.291	-28.843	-26.352	26.083	-14.338	17.917
6	-36.041	21.410	27.977	46.745	37.450	26.103	-23.937	-19.298	-21.839	-27.088	11.968	32.753	-7.241	13.544
7	-16.284	44.015	8.945	0.692	-2.607	-1.569	-9.310	-27.550	6.761	7.560	19.780	31.911	-41.651	-7.560
8	-44.993	1.149	42.998	46.142	35.365	2.404	-1.625	-2.298	19.278	6.908	1.625	26.666	-17.027	-15.995
9	-50.895	1.928	27.713	-2.500	41.859	30.929	10.308	5.000	-12.490	-15.492	-10.308	9.024	-1.278	7.746
10	4.831	84.830	-34.838	-22.500	-39.873	-47.589	50.312	45.000	43.512	42.667	-50.312	-41.055	3.737	8.533
11	-48.376	21.242	33.555	55.457	103.345	31.636	-22.391	-52.788	-24.443	-25.010	53.257	-34.712	-61.080	39.302
12	-70.778	6.128	32.618	-5.000	136.906	34.596	20.616	-86.533	-65.235	-25.787	53.600	-82.206	-84.853	77.360
13	-58.178	-0.419	58.941	57.898	50.153	2.747	0.504	0.482	7.193	11.867	-0.321	31.198	-34.671	-8.477
14	6.218	57.299	-64.799	45.318	18.718	-9.899	34.152	21.600	20.396	22.136	-34.152	49.963	-61.889	3.162
15	-98.812	-7.679	54.642	91.133	65.775	60.982	10.860	15.358	35.862	-30.546	-10.860	25.002	10.860	2.194
16	-126.094	-24.238	96.299	109.936	75.500	-5.856	29.130	-23.965	27.713	19.596	-20.022	52.166	-60.639	-19.596
17	-71.352	-6.976	55.806	67.865	60.133	2.095	7.799	6.976	15.760	15.454	-7.799	17.498	-31.015	3.091
18	-90.491	14.766	48.669	94.182	249.554	45.409	-15.220	-127.058	-84.297	-47.124	107.829	-144.472	-169.522	103.672
19	-36.856	26.699	-21.602	16.008	9.357	16.542	11.133	5.401	-50.344	-59.701	-11.133	16.287	20.407	-19.900
20	-2.741	64.760	-83.808	62.104	25.676	2.465	43.193	20.952	19.164	18.181	-43.193	58.030	-67.612	-6.060
21	-6.726	51.997	-56.997	20.862	1.613	-10.910	40.303	42.483	34.149	30.184	-13.434	21.801	-55.116	-6.037
22	-44.257	39.980	21.155	-35.000	-15.784	18.699	49.497	70.000	23.609	-15.420	-49.497	-11.135	48.463	-1.788
23	-108.493	-26.075	101.254	91.110	38.117	-35.359	31.339	-32.954	86.452	48.328	-9.369	67.593	-93.445	-48.328
24	-71.645	-3.220	67.712	69.499	56.096	7.213	3.870	-7.734	17.584	20.723	-0.930	28.816	-22.759	-29.012
25	-54.980	33.243	34.527	0.000	-15.195	-21.737	-34.527	-35.211	-47.944	-47.013	6.905	36.196	19.240	9.403
26	-63.487	58.409	13.515	-22.500	46.896	30.167	50.312	-14.142	-46.819	-26.172	-39.131	-33.106	18.964	26.172
27	-16.672	81.366	-57.535	27.122	-21.366	-24.011	42.884	-27.318	82.733	46.249	-22.522	58.501	-85.819	-46.249
28	-52.298	27.150	20.223	-20.000	39.447	28.599	28.284	31.623	-22.609	-20.223	-14.142	-24.253	20.223	10.111
29	-64.350	59.189	2.962	-35.000	6.445	6.283	49.497	70.000	-5.298	-4.683	-49.497	-27.044	28.917	0.937
30	-61.271	30.994	16.953	-40.000	3.259	17.981	44.721	80.000	22.784	-13.402	-44.721	-24.583	40.694	5.347