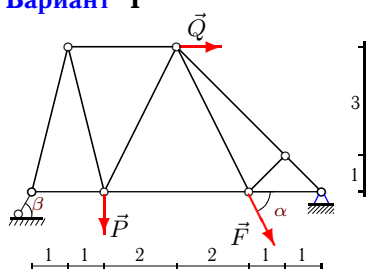
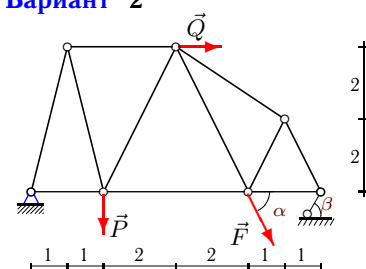
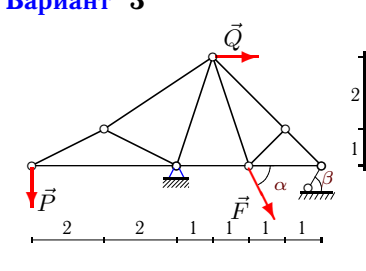
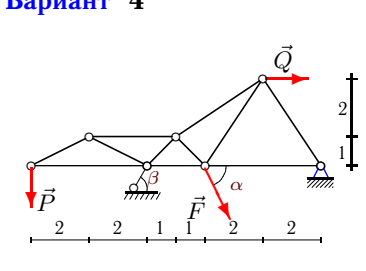
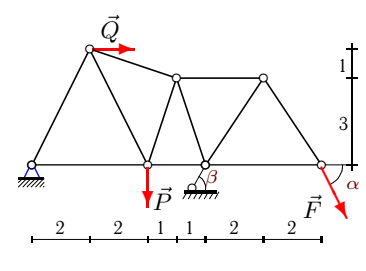
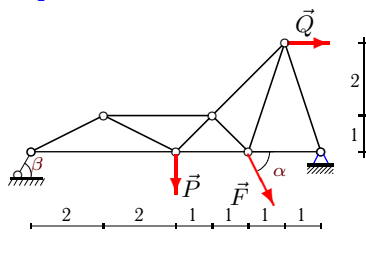
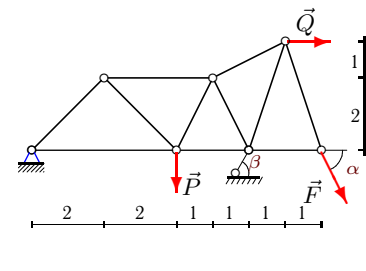
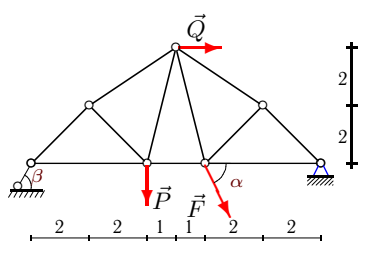
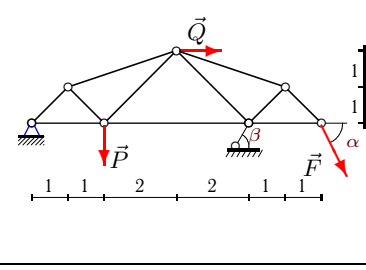
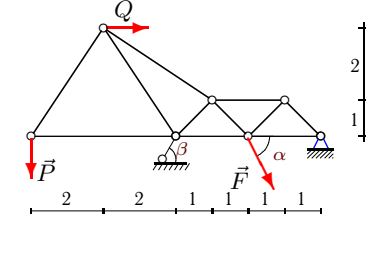
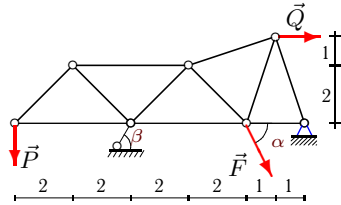


## Расчет фермы

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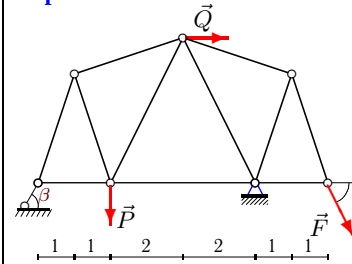
<p><b>Вариант 1</b></p>  <p><b>C6.</b>  <math>P = 20\text{кН}</math>,  <math>F = 1\text{кН}</math>,  <math>\alpha = 50^\circ</math>,  <math>\beta = 45^\circ</math>,  <math>Q = 20\text{кН}</math>.</p>	<p><b>Вариант 2</b></p>  <p><b>C6.</b>  <math>P = 25\text{кН}</math>,  <math>F = 2\text{кН}</math>,  <math>\alpha = 55^\circ</math>,  <math>\beta = 45^\circ</math>,  <math>Q = 20\text{кН}</math>.</p>
<p><b>Вариант 3</b></p>  <p><b>C6.</b>  <math>P = 15\text{кН}</math>,  <math>F = 3\text{кН}</math>,  <math>\alpha = 45^\circ</math>,  <math>\beta = 30^\circ</math>,  <math>Q = 10\text{кН}</math>.</p>	<p><b>Вариант 4</b></p>  <p><b>C6.</b>  <math>P = 40\text{кН}</math>,  <math>F = 4\text{кН}</math>,  <math>\alpha = 70^\circ</math>,  <math>\beta = 60^\circ</math>,  <math>Q = 50\text{кН}</math>.</p>
<p><b>Вариант 5</b></p>  <p><b>C6.</b>  <math>P = 35\text{кН}</math>,  <math>F = 5\text{кН}</math>,  <math>\alpha = 65^\circ</math>,  <math>\beta = 45^\circ</math>,  <math>Q = 50\text{кН}</math>.</p>	<p><b>Вариант 6</b></p>  <p><b>C6.</b>  <math>P = 20\text{кН}</math>,  <math>F = 6\text{кН}</math>,  <math>\alpha = 50^\circ</math>,  <math>\beta = 45^\circ</math>,  <math>Q = 10\text{кН}</math>.</p>
<p><b>Вариант 7</b></p>  <p><b>C6.</b>  <math>P = 10\text{кН}</math>,  <math>F = 7\text{кН}</math>,  <math>\alpha = 40^\circ</math>,  <math>\beta = 30^\circ</math>,  <math>Q = 10\text{кН}</math>.</p>	<p><b>Вариант 8</b></p>  <p><b>C6.</b>  <math>P = 15\text{кН}</math>,  <math>F = 8\text{кН}</math>,  <math>\alpha = 45^\circ</math>,  <math>\beta = 30^\circ</math>,  <math>Q = 50\text{кН}</math>.</p>
<p><b>Вариант 9</b></p>  <p><b>C6.</b>  <math>P = 15\text{кН}</math>,  <math>F = 9\text{кН}</math>,  <math>\alpha = 45^\circ</math>,  <math>\beta = 30^\circ</math>,  <math>Q = 20\text{кН}</math>.</p>	<p><b>Вариант 10</b></p>  <p><b>C6.</b>  <math>P = 25\text{кН}</math>,  <math>F = 10\text{кН}</math>,  <math>\alpha = 55^\circ</math>,  <math>\beta = 45^\circ</math>,  <math>Q = 10\text{кН}</math>.</p>

**Вариант 11**



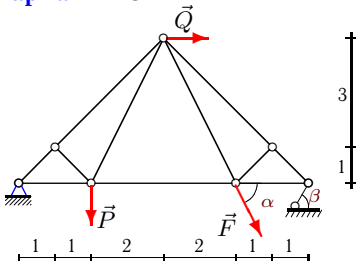
**C6.**  
 $P = 15\text{кН}$ ,  
 $F = 11\text{кН}$ ,  
 $\alpha = 45^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 30\text{кН}$ .

**Вариант 12**



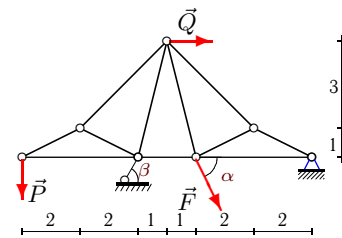
**C6.**  
 $P = 5\text{кН}$ ,  
 $F = 12\text{кН}$ ,  
 $\alpha = 35^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 20\text{кН}$ .

**Вариант 13**



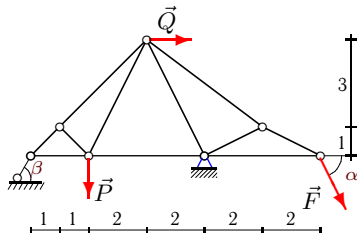
**C6.**  
 $P = 30\text{кН}$ ,  
 $F = 13\text{кН}$ ,  
 $\alpha = 60^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 20\text{кН}$ .

**Вариант 14**



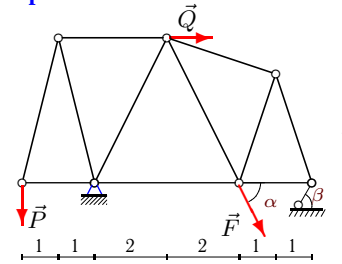
**C6.**  
 $P = 5\text{кН}$ ,  
 $F = 14\text{кН}$ ,  
 $\alpha = 35^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 50\text{кН}$ .

**Вариант 15**



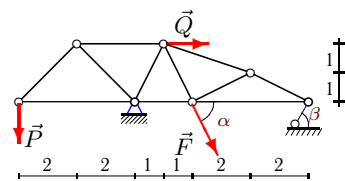
**C6.**  
 $P = 25\text{кН}$ ,  
 $F = 15\text{кН}$ ,  
 $\alpha = 55^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 60\text{кН}$ .

**Вариант 16**



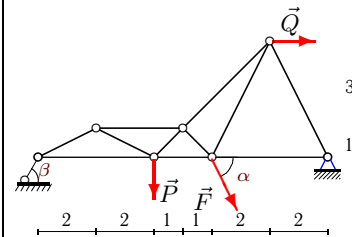
**C6.**  
 $P = 40\text{кН}$ ,  
 $F = 16\text{кН}$ ,  
 $\alpha = 70^\circ$ ,  
 $\beta = 60^\circ$ ,  
 $Q = 20\text{кН}$ .

**Вариант 17**



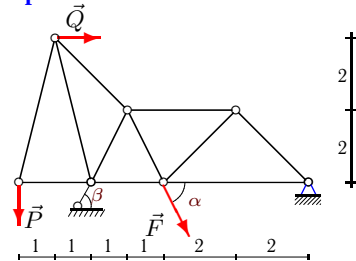
**C6.**  
 $P = 35\text{кН}$ ,  
 $F = 17\text{кН}$ ,  
 $\alpha = 65^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 50\text{кН}$ .

**Вариант 18**



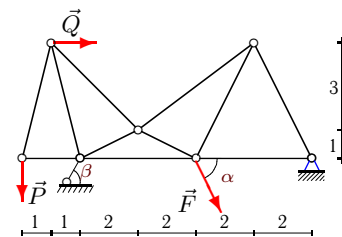
**C6.**  
 $P = 10\text{кН}$ ,  
 $F = 18\text{кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 50\text{кН}$ .

**Вариант 19**

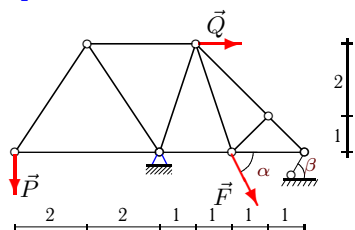


**C6.**  
 $P = 10\text{кН}$ ,  
 $F = 19\text{кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 40\text{кН}$ .

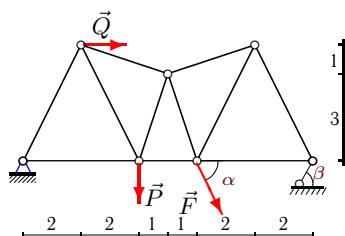
**Вариант 20**



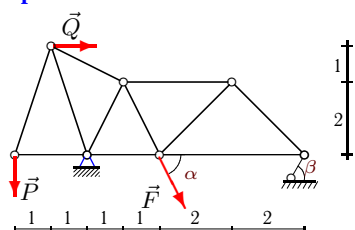
**C6.**  
 $P = 20\text{кН}$ ,  
 $F = 20\text{кН}$ ,  
 $\alpha = 50^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 60\text{кН}$ .

**Вариант 21****C6.**

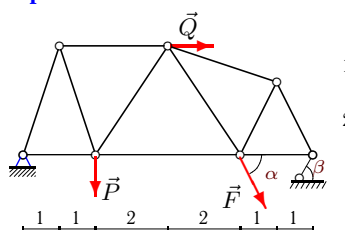
$P = 25 \text{ кН}$ ,  
 $F = 21 \text{ кН}$ ,  
 $\alpha = 55^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 10 \text{ кН}$ .

**Вариант 22****C6.**

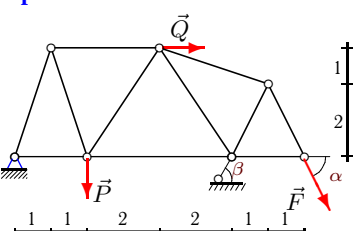
$P = 5 \text{ кН}$ ,  
 $F = 22 \text{ кН}$ ,  
 $\alpha = 35^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 50 \text{ кН}$ .

**Вариант 23****C6.**

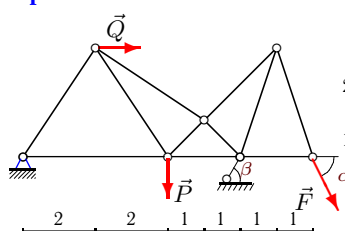
$P = 35 \text{ кН}$ ,  
 $F = 23 \text{ кН}$ ,  
 $\alpha = 65^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 40 \text{ кН}$ .

**Вариант 24****C6.**

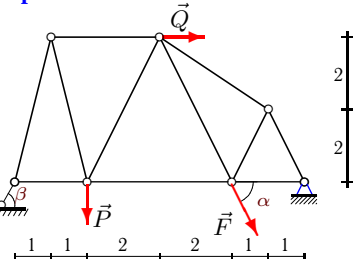
$P = 15 \text{ кН}$ ,  
 $F = 24 \text{ кН}$ ,  
 $\alpha = 45^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 20 \text{ кН}$ .

**Вариант 25****C6.**

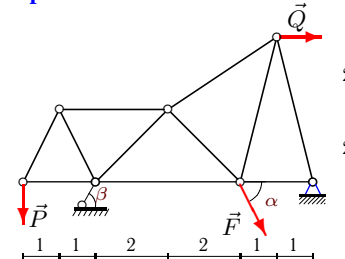
$P = 10 \text{ кН}$ ,  
 $F = 25 \text{ кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 20 \text{ кН}$ .

**Вариант 26****C6.**

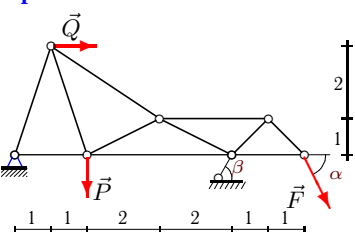
$P = 10 \text{ кН}$ ,  
 $F = 26 \text{ кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 10 \text{ кН}$ .

**Вариант 27****C6.**

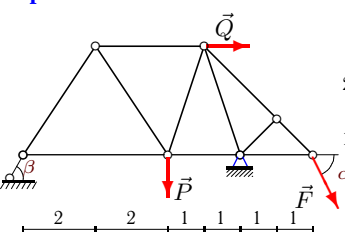
$P = 30 \text{ кН}$ ,  
 $F = 27 \text{ кН}$ ,  
 $\alpha = 60^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 20 \text{ кН}$ .

**Вариант 28****C6.**

$P = 45 \text{ кН}$ ,  
 $F = 28 \text{ кН}$ ,  
 $\alpha = 75^\circ$ ,  
 $\beta = 60^\circ$ ,  
 $Q = 20 \text{ кН}$ .

**Вариант 29****C6.**

$P = 5 \text{ кН}$ ,  
 $F = 29 \text{ кН}$ ,  
 $\alpha = 35^\circ$ ,  
 $\beta = 30^\circ$ ,  
 $Q = 20 \text{ кН}$ .

**Вариант 30****C6.**

$P = 25 \text{ кН}$ ,  
 $F = 30 \text{ кН}$ ,  
 $\alpha = 55^\circ$ ,  
 $\beta = 45^\circ$ ,  
 $Q = 10 \text{ кН}$ .

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	-25.834	15.575	7.342	-3.894	-10.000	-10.260	-5.351	-2.596	-22.026	-22.026	5.351	16.556	0.856	-0.000
2	-38.626	9.160	24.719	40.916	35.285	26.218	-9.441	-4.580	-15.755	-19.542	9.441	17.710	-7.939	9.771
3	-0.968	23.561	-12.879	-30.000	-16.178	-17.593	33.541	30.905	9.107	9.107	4.792	-27.094	2.236	-0.000
4	-76.871	-0.414	51.006	-80.000	-181.330	-77.147	89.443	160.000	109.360	0.497	-89.443	-5.901	91.690	-73.404
5	-116.332	-24.688	90.820	103.988	80.186	-0.908	27.602	-32.018	6.042	5.446	-16.282	52.244	-62.916	-5.446
6	-21.256	17.197	10.464	7.399	9.596	-15.523	-16.545	-29.596	-3.107	-18.127	16.545	17.820	-20.928	20.443
7	-45.961	-3.167	35.332	42.794	33.044	3.862	4.478	6.333	17.441	4.743	-4.478	14.721	-6.000	-12.965
8	-40.523	29.394	-17.475	6.396	0.462	-11.129	12.356	12.601	-42.393	-41.570	-2.471	17.263	-0.229	8.314
9	-61.268	1.212	40.304	62.480	48.692	-0.000	-1.714	-1.916	10.062	9.000	0.857	20.356	-23.999	-4.500
10	-62.332	-13.404	65.896	-16.667	-105.000	-75.736	30.046	50.478	26.808	18.956	-63.698	9.057	30.541	-18.956
11	-59.589	10.185	25.185	-15.000	-54.219	-56.194	21.213	30.000	27.523	-10.736	-21.213	3.404	8.904	1.562
12	-8.535	24.177	-24.589	17.196	6.500	7.536	12.959	7.776	4.353	7.255	-10.367	16.587	-20.875	-5.804
13	-52.444	15.315	36.690	67.758	52.758	51.887	-21.658	-21.658	-36.690	-36.690	-0.000	33.541	12.587	0.000
14	-27.439	32.677	-39.293	-10.000	22.867	37.914	11.180	9.428	-61.616	-73.067	3.727	18.533	19.505	-24.356
15	-37.079	68.812	-44.583	-0.000	-12.500	-15.971	44.583	44.583	24.575	27.475	-0.000	27.951	-79.682	5.495
16	-31.259	45.012	11.574	-10.000	13.765	9.128	41.231	20.000	-6.339	-10.566	-41.231	-5.603	7.845	8.452
17	-55.654	51.938	-2.165	-35.000	-5.877	-4.593	49.497	70.000	3.873	3.423	-49.497	-18.937	17.568	-0.685
18	-47.556	30.942	-18.744	-2.511	-40.627	-32.085	20.956	37.488	53.904	-34.594	-20.956	27.396	26.508	-8.020
19	-45.563	27.404	-10.383	-2.500	31.396	-18.159	10.308	-65.997	-54.809	-38.756	37.795	-35.190	-16.984	38.756
20	-75.516	32.660	3.762	-5.000	102.660	-59.186	20.616	-94.281	-65.321	-36.515	48.103	-110.299	-126.410	80.334
21	-13.146	51.101	-12.585	-16.667	-11.487	-17.798	30.046	33.333	12.585	12.585	-30.046	-27.513	18.133	0.000
22	-119.240	-11.953	59.142	113.264	114.319	66.004	13.363	-48.127	-37.405	-33.062	3.652	1.827	-30.338	46.286
23	-65.002	40.563	21.612	-11.667	52.784	30.563	36.893	-22.361	-30.563	-21.612	-26.352	-17.400	6.220	21.612
24	-78.502	7.993	47.956	81.166	79.158	53.520	-8.425	-5.328	-21.664	-26.808	8.425	8.422	-0.188	19.149
25	-99.356	-8.690	69.519	96.460	81.103	11.116	9.160	5.793	14.519	17.966	-9.160	22.462	-27.981	-12.833
26	-88.720	-7.237	67.900	83.895	62.533	14.346	8.698	-0.757	23.635	17.616	-8.194	23.784	-0.742	-35.233
27	-51.846	35.037	25.945	-13.759	-15.000	-34.327	-18.910	-9.173	-31.582	-39.173	18.910	13.030	6.556	19.586
28	-59.395	16.364	64.296	-22.500	-66.466	-55.304	50.312	45.000	17.044	-16.868	-50.312	-15.107	28.477	7.122
29	-102.377	-12.211	67.690	98.306	83.532	7.122	12.872	-18.325	33.267	23.524	-2.157	15.756	-38.486	-23.524
30	-22.349	54.433	-6.871	1.619	-11.572	-7.367	5.839	6.478	34.754	34.754	-5.839	31.473	-57.377	0.000