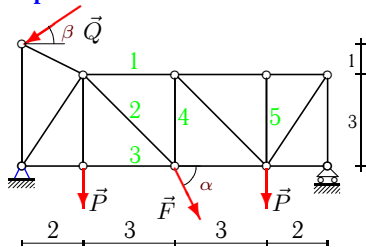
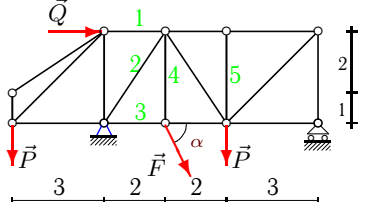
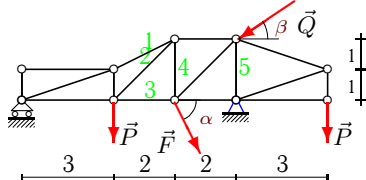
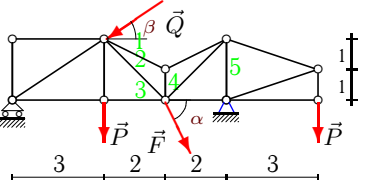
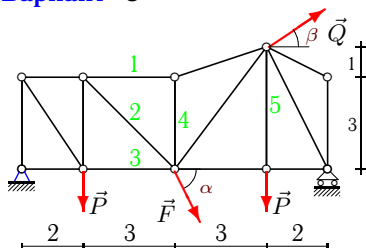
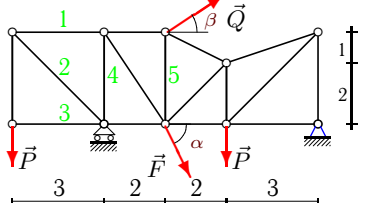
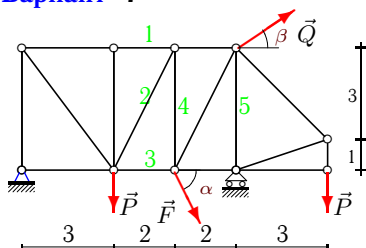
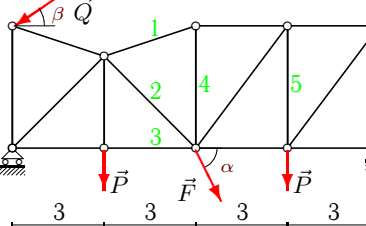
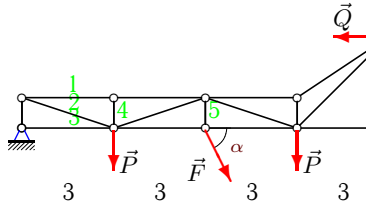
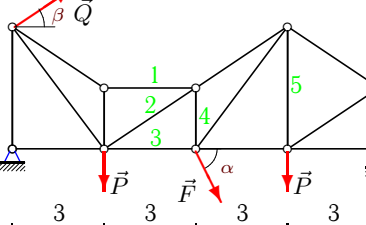
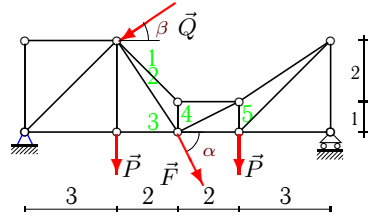


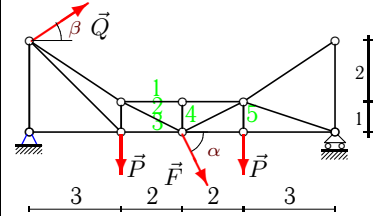
## Расчет фермы

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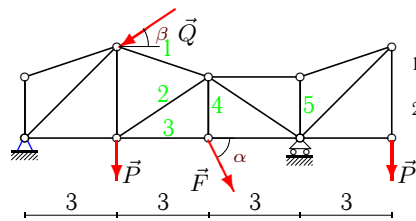
<p><b>Вариант 1</b></p>  <p><b>C5.</b>  <math>P = 90\text{кН}</math>,  <math>Q = 70\text{кН}</math>,  <math>F = 19\text{кН}</math>,  <math>\alpha = 55^\circ</math>,  <math>\beta = 15^\circ</math>.</p>	<p><b>Вариант 2</b></p>  <p><b>C5.</b>  <math>P = 60\text{кН}</math>,  <math>Q = 60\text{кН}</math>,  <math>F = 31\text{кН}</math>,  <math>\alpha = 40^\circ</math>.</p>
<p><b>Вариант 3</b></p>  <p><b>C5.</b>  <math>P = 10\text{кН}</math>,  <math>Q = 90\text{кН}</math>,  <math>F = 45\text{кН}</math>,  <math>\alpha = 60^\circ</math>,  <math>\beta = 45^\circ</math>.</p>	<p><b>Вариант 4</b></p>  <p><b>C5.</b>  <math>P = 10\text{кН}</math>,  <math>Q = 60\text{кН}</math>,  <math>F = 53\text{кН}</math>,  <math>\alpha = 60^\circ</math>,  <math>\beta = 45^\circ</math>.</p>
<p><b>Вариант 5</b></p>  <p><b>C5.</b>  <math>P = 90\text{кН}</math>,  <math>Q = 80\text{кН}</math>,  <math>F = 54\text{кН}</math>,  <math>\alpha = 55^\circ</math>,  <math>\beta = 15^\circ</math>.</p>	<p><b>Вариант 6</b></p>  <p><b>C5.</b>  <math>P = 50\text{кН}</math>,  <math>Q = 80\text{кН}</math>,  <math>F = 72\text{кН}</math>,  <math>\alpha = 35^\circ</math>,  <math>\beta = 45^\circ</math>.</p>
<p><b>Вариант 7</b></p>  <p><b>C5.</b>  <math>P = 70\text{кН}</math>,  <math>Q = 90\text{кН}</math>,  <math>F = 84\text{кН}</math>,  <math>\alpha = 45^\circ</math>,  <math>\beta = 15^\circ</math>.</p>	<p><b>Вариант 8</b></p>  <p><b>C5.</b>  <math>P = 70\text{кН}</math>,  <math>Q = 90\text{кН}</math>,  <math>F = 109\text{кН}</math>,  <math>\alpha = 45^\circ</math>,  <math>\beta = 30^\circ</math>.</p>
<p><b>Вариант 9</b></p>  <p><b>C5.</b>  <math>P = 40\text{кН}</math>,  <math>Q = 90\text{кН}</math>,  <math>F = 116\text{кН}</math>,  <math>\alpha = 75^\circ</math>.</p>	<p><b>Вариант 10</b></p>  <p><b>C5.</b>  <math>P = 90\text{кН}</math>,  <math>Q = 30\text{кН}</math>,  <math>F = 10\text{кН}</math>,  <math>\alpha = 55^\circ</math>,  <math>\beta = 15^\circ</math>.</p>

**Вариант 11**

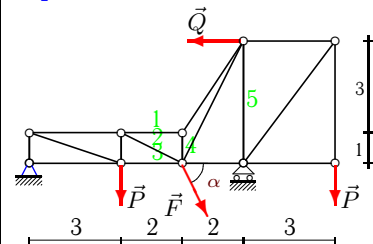
**C5.**  
 $P = 60\text{кН}$ ,  
 $Q = 80\text{кН}$ ,  
 $F = 11\text{кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 15^\circ$ .

**Вариант 12**

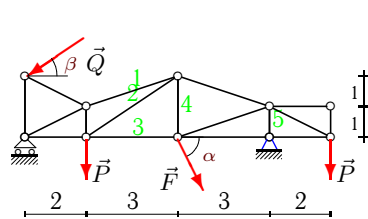
**C5.**  
 $P = 80\text{кН}$ ,  
 $Q = 80\text{кН}$ ,  
 $F = 12\text{кН}$ ,  
 $\alpha = 50^\circ$ ,  
 $\beta = 15^\circ$ .

**Вариант 13**

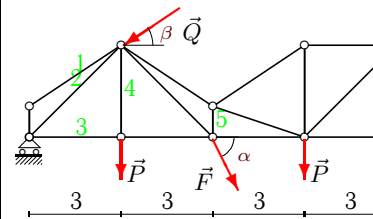
**C5.**  
 $P = 60\text{кН}$ ,  
 $Q = 50\text{кН}$ ,  
 $F = 13\text{кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 15^\circ$ .

**Вариант 14**

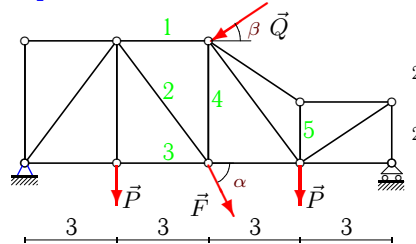
**C5.**  
 $P = 30\text{кН}$ ,  
 $Q = 50\text{кН}$ ,  
 $F = 14\text{кН}$ ,  
 $\alpha = 70^\circ$ .

**Вариант 15**

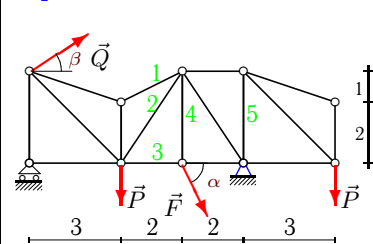
**C5.**  
 $P = 60\text{кН}$ ,  
 $Q = 30\text{кН}$ ,  
 $F = 15\text{кН}$ ,  
 $\alpha = 40^\circ$ ,  
 $\beta = 45^\circ$ .

**Вариант 16**

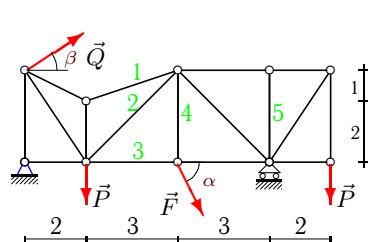
**C5.**  
 $P = 40\text{кН}$ ,  
 $Q = 60\text{кН}$ ,  
 $F = 16\text{кН}$ ,  
 $\alpha = 75^\circ$ ,  
 $\beta = 30^\circ$ .

**Вариант 17**

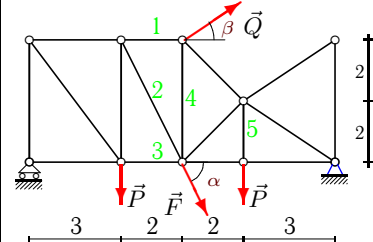
**C5.**  
 $P = 90\text{кН}$ ,  
 $Q = 40\text{кН}$ ,  
 $F = 17\text{кН}$ ,  
 $\alpha = 55^\circ$ ,  
 $\beta = 15^\circ$ .

**Вариант 18**

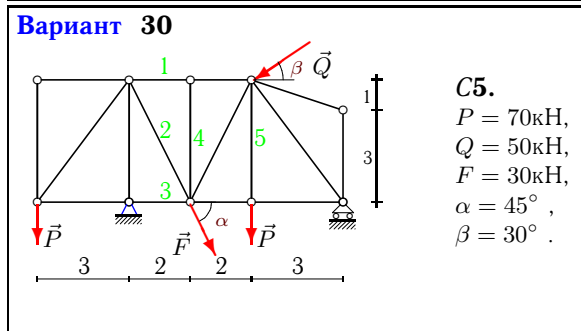
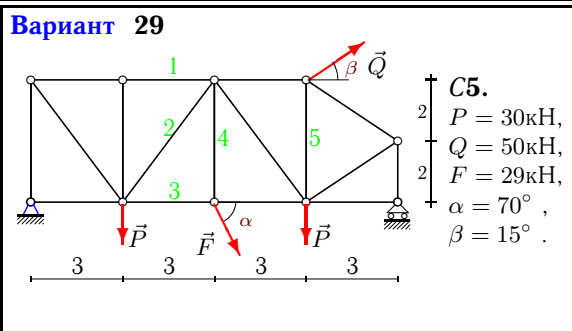
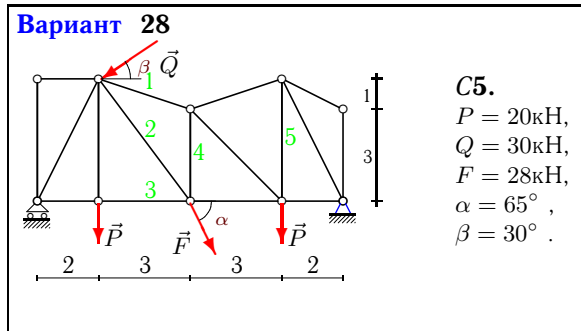
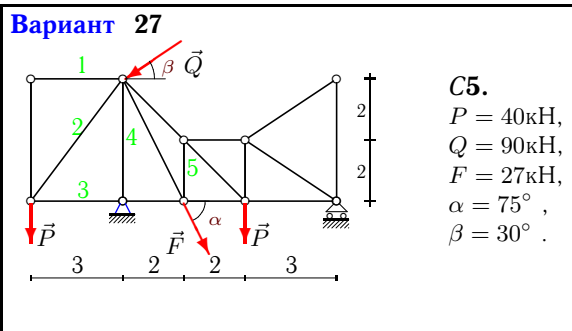
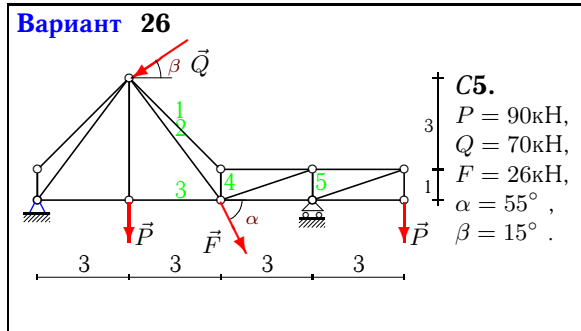
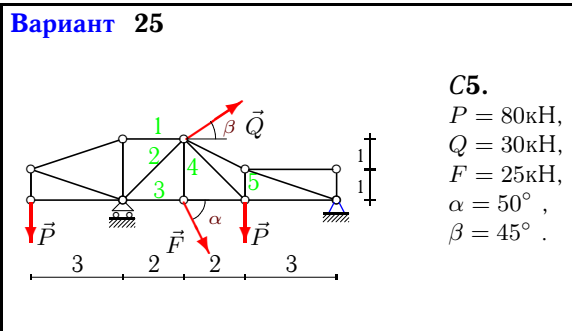
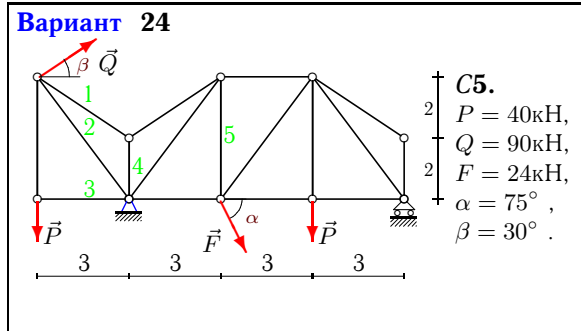
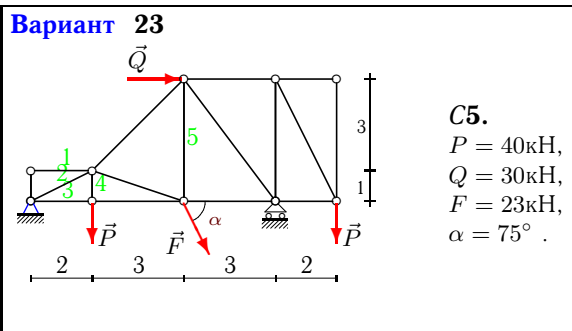
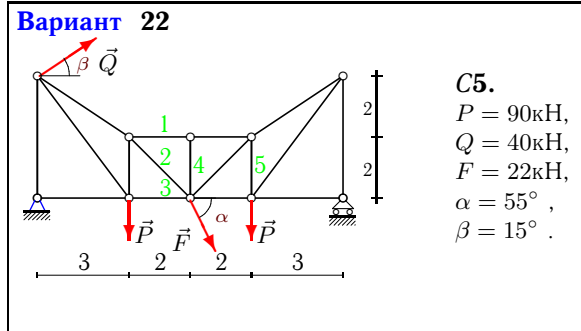
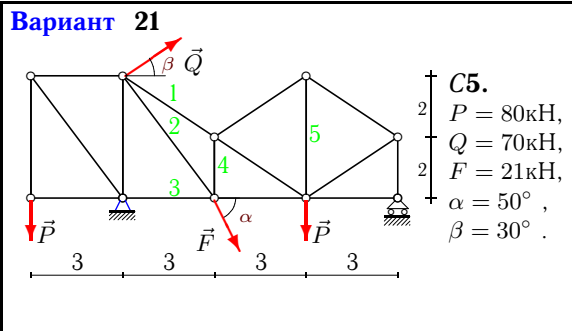
**C5.**  
 $P = 20\text{кН}$ ,  
 $Q = 70\text{кН}$ ,  
 $F = 18\text{кН}$ ,  
 $\alpha = 65^\circ$ ,  
 $\beta = 45^\circ$ .

**Вариант 19**

**C5.**  
 $P = 90\text{кН}$ ,  
 $Q = 70\text{кН}$ ,  
 $F = 19\text{кН}$ ,  
 $\alpha = 55^\circ$ ,  
 $\beta = 15^\circ$ .

**Вариант 20**

**C5.**  
 $P = 90\text{кН}$ ,  
 $Q = 30\text{кН}$ ,  
 $F = 20\text{кН}$ ,  
 $\alpha = 55^\circ$ ,  
 $\beta = 30^\circ$ .



Отвѣты

	$X_A$	$Y_A$	$R_B$	$S_1$	$S_2$	$S_3$	$S_4$	$S_5$
1	56.717	142.945	70.736	-27.893	49.254	3.963	-19.264	-0.000
2	-83.747	99.947	39.979	0.000	-48.011	50.379	19.926	-0.000
3	41.140	91.865	30.746	-103.125	35.883	66.865	20.746	-86.865
4	15.926	57.418	50.908	-72.488	43.698	76.362	-64.835	-52.418
5	-108.247	77.066	126.462	-38.444	-18.291	159.625	-12.815	90.000
6	-115.547	27.023	57.706	50.000	-70.711	0.000	-7.706	62.421
7	-146.330	-22.706	198.809	17.029	103.648	82.948	-92.706	-181.309
8	0.868	82.557	179.518	-75.194	57.615	108.537	23.778	-12.557
9	59.977	118.524	73.524	-355.571	374.805	-59.977	-0.000	112.047
10	-34.714	76.672	103.755	-184.610	10.030	182.001	-123.074	38.122
11	68.848	101.211	46.565	-159.557	160.242	32.364	-112.824	-79.694
12	-84.988	40.709	107.778	-378.892	-41.559	423.778	-0.000	80.000
13	38.338	47.511	93.786	0.827	46.315	-29.363	8.356	30.000
14	45.212	36.616	36.540	-123.080	14.794	64.636	-184.619	-6.540
15	9.723	90.723	60.132	-37.327	59.284	7.297	-25.720	-90.723
16	47.820	42.237	83.218	0.000	-117.688	83.218	40.000	-86.711
17	28.886	115.018	89.260	-105.027	31.273	57.377	-11.093	-89.260
18	-57.105	70.009	-63.193	-60.042	72.768	-36.158	16.314	-20.000
19	-78.513	7.364	170.083	-133.768	151.066	30.981	15.564	0.000
20	-37.452	101.084	80.299	-55.374	-10.846	60.224	96.355	90.000
21	-74.120	82.115	58.972	-68.404	93.824	14.120	-58.972	58.972
22	-51.256	73.203	114.465	-196.164	-9.113	215.227	0.000	-138.931
23	-35.953	13.331	88.885	0.000	-29.809	62.615	40.000	35.549
24	-84.154	-12.520	70.702	-196.364	142.404	0.000	-217.846	-7.520
25	-37.283	16.900	141.038	120.000	-86.320	-58.962	19.151	-8.450
26	52.702	79.229	140.187	168.913	-185.411	6.720	119.440	-50.187
27	70.954	182.453	-31.373	0.000	50.000	-30.000	-182.453	47.059
28	14.147	25.296	55.081	-23.359	34.334	27.540	-2.091	29.512
29	-58.215	24.292	50.019	-18.219	7.136	72.152	27.251	37.950
30	22.088	180.610	5.603	-2.805	123.666	-74.588	0.000	70.000