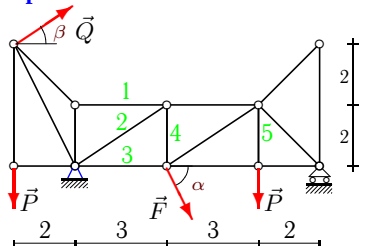
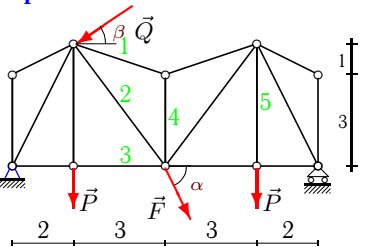
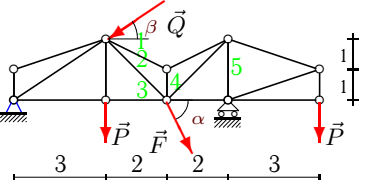
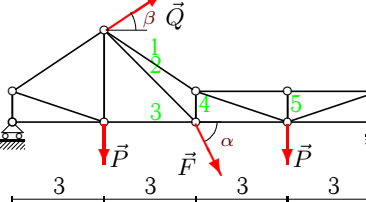
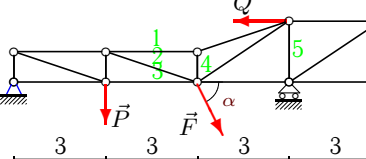
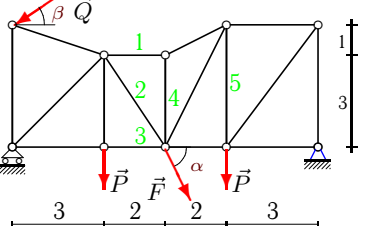
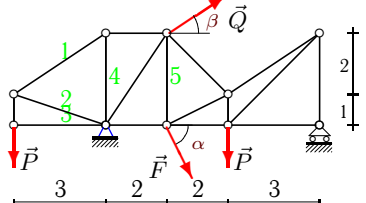
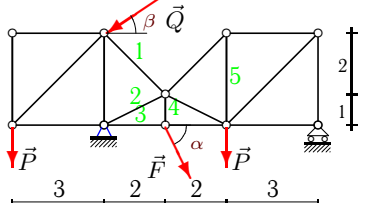
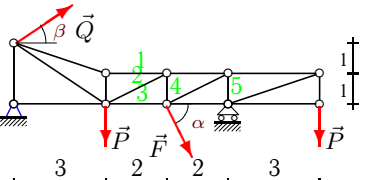
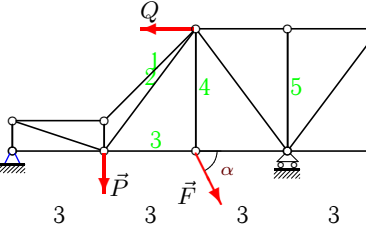
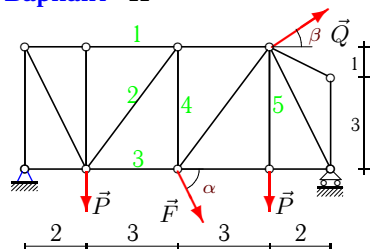


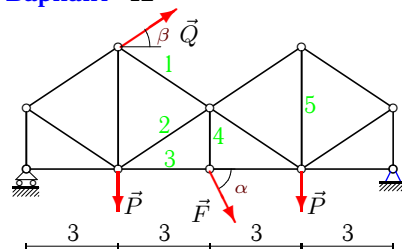
Расчет фермы

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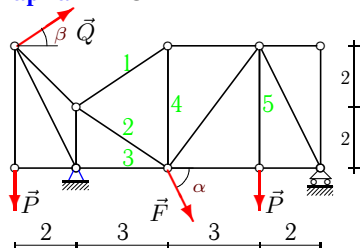
| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Вариант 1</p>  <p>C5. $P = 10\text{кН}$, $Q = 70\text{кН}$, $F = 16\text{кН}$, $\alpha = 60^\circ$, $\beta = 30^\circ$.</p> | <p>Вариант 2</p>  <p>C5. $P = 10\text{кН}$, $Q = 70\text{кН}$, $F = 25\text{кН}$, $\alpha = 60^\circ$, $\beta = 15^\circ$.</p> |
| <p>Вариант 3</p>  <p>C5. $P = 70\text{кН}$, $Q = 30\text{кН}$, $F = 43\text{кН}$, $\alpha = 45^\circ$, $\beta = 15^\circ$.</p> | <p>Вариант 4</p>  <p>C5. $P = 80\text{кН}$, $Q = 40\text{кН}$, $F = 64\text{кН}$, $\alpha = 50^\circ$, $\beta = 30^\circ$.</p> |
| <p>Вариант 5</p>  <p>C5. $P = 10\text{кН}$, $Q = 50\text{кН}$, $F = 78\text{кН}$, $\alpha = 60^\circ$.</p> | <p>Вариант 6</p>  <p>C5. $P = 70\text{кН}$, $Q = 40\text{кН}$, $F = 73\text{кН}$, $\alpha = 45^\circ$, $\beta = 30^\circ$.</p> |
| <p>Вариант 7</p>  <p>C5. $P = 40\text{кН}$, $Q = 40\text{кН}$, $F = 84\text{кН}$, $\alpha = 75^\circ$, $\beta = 30^\circ$.</p> | <p>Вариант 8</p>  <p>C5. $P = 10\text{кН}$, $Q = 60\text{кН}$, $F = 91\text{кН}$, $\alpha = 60^\circ$, $\beta = 30^\circ$.</p> |
| <p>Вариант 9</p>  <p>C5. $P = 60\text{кН}$, $Q = 70\text{кН}$, $F = 104\text{кН}$, $\alpha = 40^\circ$, $\beta = 15^\circ$.</p> | <p>Вариант 10</p>  <p>C5. $P = 30\text{кН}$, $Q = 70\text{кН}$, $F = 10\text{кН}$, $\alpha = 70^\circ$.</p> |

Вариант 11

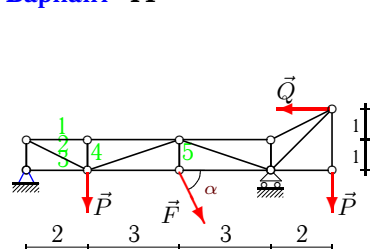
C5.
 $P = 20 \text{ кН}$,
 $Q = 60 \text{ кН}$,
 $F = 11 \text{ кН}$,
 $\alpha = 65^\circ$,
 $\beta = 15^\circ$.

Вариант 12

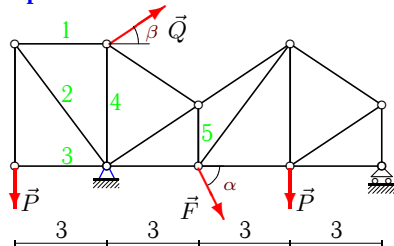
C5.
 $P = 30 \text{ кН}$,
 $Q = 60 \text{ кН}$,
 $F = 12 \text{ кН}$,
 $\alpha = 70^\circ$,
 $\beta = 30^\circ$.

Вариант 13

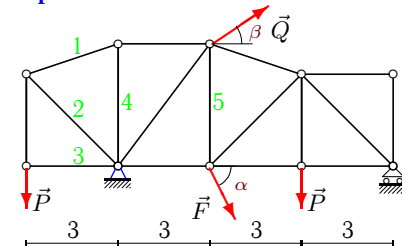
C5.
 $P = 80 \text{ кН}$,
 $Q = 90 \text{ кН}$,
 $F = 13 \text{ кН}$,
 $\alpha = 50^\circ$,
 $\beta = 30^\circ$.

Вариант 14

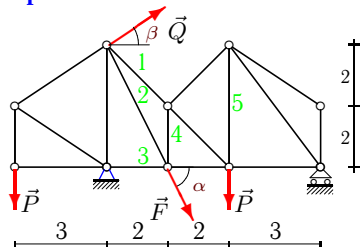
C5.
 $P = 40 \text{ кН}$,
 $Q = 30 \text{ кН}$,
 $F = 14 \text{ кН}$,
 $\alpha = 75^\circ$.

Вариант 15

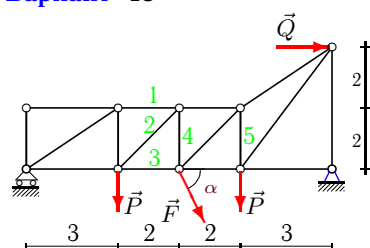
C5.
 $P = 40 \text{ кН}$,
 $Q = 80 \text{ кН}$,
 $F = 15 \text{ кН}$,
 $\alpha = 75^\circ$,
 $\beta = 30^\circ$.

Вариант 16

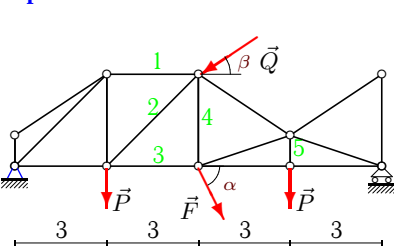
C5.
 $P = 50 \text{ кН}$,
 $Q = 70 \text{ кН}$,
 $F = 16 \text{ кН}$,
 $\alpha = 35^\circ$,
 $\beta = 30^\circ$.

Вариант 17

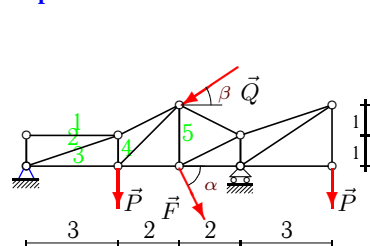
C5.
 $P = 10 \text{ кН}$,
 $Q = 30 \text{ кН}$,
 $F = 17 \text{ кН}$,
 $\alpha = 60^\circ$,
 $\beta = 30^\circ$.

Вариант 18

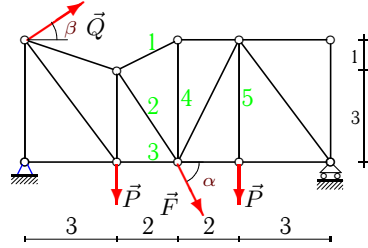
C5.
 $P = 70 \text{ кН}$,
 $Q = 90 \text{ кН}$,
 $F = 18 \text{ кН}$,
 $\alpha = 45^\circ$.

Вариант 19

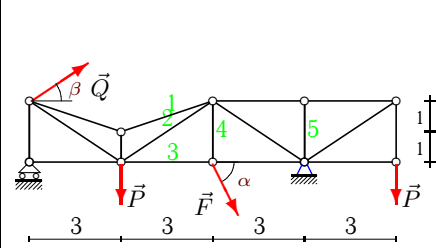
C5.
 $P = 60 \text{ кН}$,
 $Q = 60 \text{ кН}$,
 $F = 19 \text{ кН}$,
 $\alpha = 40^\circ$,
 $\beta = 15^\circ$.

Вариант 20

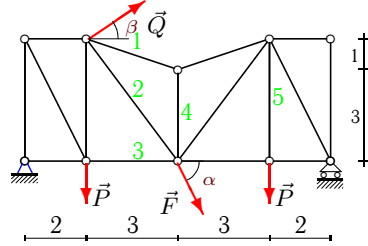
C5.
 $P = 50 \text{ кН}$,
 $Q = 40 \text{ кН}$,
 $F = 20 \text{ кН}$,
 $\alpha = 35^\circ$,
 $\beta = 15^\circ$.

Вариант 21

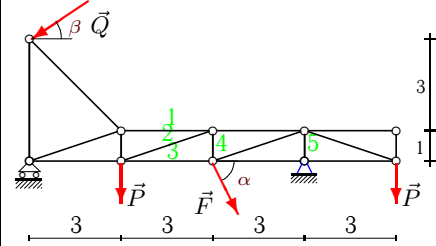
C5.
 $P = 70\text{кН}$,
 $Q = 40\text{кН}$,
 $F = 21\text{кН}$,
 $\alpha = 45^\circ$,
 $\beta = 15^\circ$.

Вариант 22

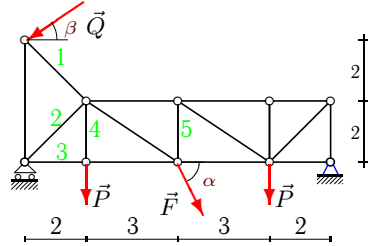
C5.
 $P = 30\text{кН}$,
 $Q = 60\text{кН}$,
 $F = 22\text{кН}$,
 $\alpha = 70^\circ$,
 $\beta = 45^\circ$.

Вариант 23

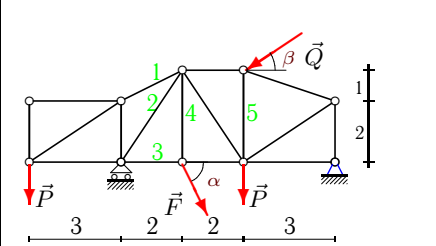
C5.
 $P = 20\text{кН}$,
 $Q = 60\text{кН}$,
 $F = 23\text{кН}$,
 $\alpha = 65^\circ$,
 $\beta = 15^\circ$.

Вариант 24

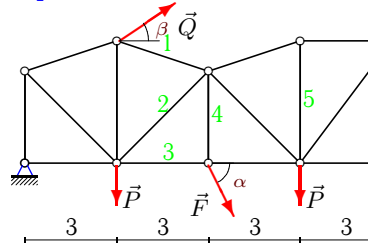
C5.
 $P = 30\text{кН}$,
 $Q = 60\text{кН}$,
 $F = 24\text{кН}$,
 $\alpha = 70^\circ$,
 $\beta = 45^\circ$.

Вариант 25

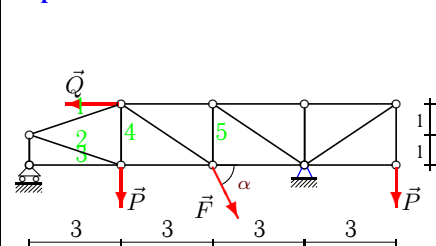
C5.
 $P = 40\text{кН}$,
 $Q = 70\text{кН}$,
 $F = 25\text{кН}$,
 $\alpha = 75^\circ$,
 $\beta = 30^\circ$.

Вариант 26

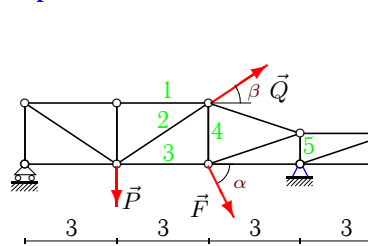
C5.
 $P = 90\text{кН}$,
 $Q = 60\text{кН}$,
 $F = 26\text{кН}$,
 $\alpha = 55^\circ$,
 $\beta = 45^\circ$.

Вариант 27

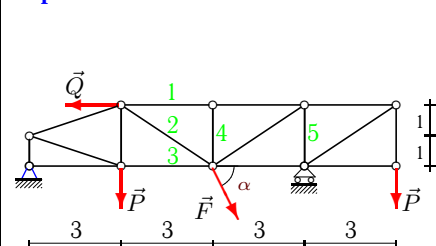
C5.
 $P = 90\text{кН}$,
 $Q = 30\text{кН}$,
 $F = 27\text{кН}$,
 $\alpha = 55^\circ$,
 $\beta = 15^\circ$.

Вариант 28

C5.
 $P = 50\text{кН}$,
 $Q = 40\text{кН}$,
 $F = 28\text{кН}$,
 $\alpha = 35^\circ$.

Вариант 29

C5.
 $P = 10\text{кН}$,
 $Q = 60\text{кН}$,
 $F = 29\text{кН}$,
 $\alpha = 60^\circ$,
 $\beta = 45^\circ$.

Вариант 30

C5.
 $P = 80\text{кН}$,
 $Q = 70\text{кН}$,
 $F = 30\text{кН}$,
 $\alpha = 50^\circ$.

Отвѣты

| | X_A | Y_A | R_B | S_1 | S_2 | S_3 | S_4 | S_5 |
|----|----------|---------|---------|----------|----------|---------|----------|----------|
| 1 | -68.622 | -50.401 | 49.257 | -146.244 | 45.792 | 116.143 | -25.401 | 10.000 |
| 2 | 55.115 | 62.365 | -2.597 | 15.104 | 36.839 | -23.932 | 9.552 | 10.000 |
| 3 | -1.428 | 31.404 | 146.767 | 63.132 | -105.492 | 48.533 | 56.467 | -111.767 |
| 4 | -75.779 | 108.174 | 80.853 | -491.607 | 415.139 | 80.853 | -244.521 | 0.000 |
| 5 | 11.000 | 36.961 | 50.589 | -191.767 | 85.258 | 99.883 | -63.922 | -40.589 |
| 6 | -16.978 | 81.953 | 129.666 | -89.922 | 47.672 | 98.119 | -44.961 | -11.953 |
| 7 | -56.382 | 103.109 | 38.028 | 48.074 | -42.164 | 0.000 | -26.667 | 119.823 |
| 8 | 6.462 | 127.132 | 1.676 | 87.627 | -56.284 | 33.880 | 78.808 | 1.676 |
| 9 | -147.283 | -9.764 | 178.497 | -160.288 | 115.486 | 136.663 | -51.647 | -118.497 |
| 10 | 66.580 | 44.243 | 25.154 | -187.709 | 148.109 | -22.715 | 9.397 | 0.000 |
| 11 | -62.604 | -1.303 | 35.744 | 0.652 | 26.629 | 45.975 | -21.303 | 20.000 |
| 12 | -56.066 | 45.459 | -4.182 | -58.680 | -51.140 | 39.414 | 11.276 | 45.459 |
| 13 | -86.299 | 31.003 | 93.956 | -69.040 | -76.245 | 129.241 | 38.296 | 80.000 |
| 14 | 26.377 | 32.571 | 60.952 | -65.142 | 72.831 | -26.377 | 0.000 | 13.523 |
| 15 | -73.164 | 5.534 | 48.955 | 30.000 | -50.000 | 0.000 | 66.188 | -52.376 |
| 16 | -73.728 | 39.175 | 35.002 | 39.528 | -53.033 | 0.000 | -12.500 | 29.176 |
| 17 | -34.481 | -0.759 | 20.481 | -58.270 | 50.808 | 26.981 | -30.722 | 35.842 |
| 18 | -102.728 | 112.364 | 40.364 | -60.546 | 41.912 | 30.910 | -29.636 | -34.728 |
| 19 | 43.401 | 88.360 | 59.382 | -88.360 | -40.107 | 73.319 | 52.007 | 60.000 |
| 20 | 22.254 | 24.418 | 97.407 | 0.000 | -77.215 | 50.999 | -12.209 | -49.732 |
| 21 | -53.486 | 51.617 | 92.879 | -90.672 | -58.386 | 128.335 | 40.550 | 70.000 |
| 22 | -49.951 | 73.210 | -34.963 | -113.043 | 105.073 | -22.611 | 20.673 | 0.000 |
| 23 | -67.676 | -5.183 | 50.499 | -67.636 | 14.668 | 65.084 | -42.777 | 20.000 |
| 24 | 34.218 | 46.179 | 78.800 | 60.584 | -20.155 | 0.963 | 6.374 | -46.179 |
| 25 | 54.151 | 27.825 | 111.323 | 85.732 | -22.205 | 15.701 | 40.000 | -12.175 |
| 26 | 27.513 | 25.003 | 218.721 | 150.935 | -235.828 | -4.186 | 21.298 | -34.092 |
| 27 | -44.464 | 85.576 | 108.777 | -98.199 | -48.640 | 143.040 | 22.117 | 27.194 |
| 28 | 17.064 | 85.151 | 30.909 | -48.871 | 48.871 | 0.000 | 34.546 | 35.151 |
| 29 | -56.926 | 14.554 | -11.865 | 17.798 | 39.418 | -50.596 | 17.838 | -4.554 |
| 30 | 50.716 | 49.883 | 133.099 | 40.352 | -54.295 | 24.108 | -0.000 | -53.099 |