

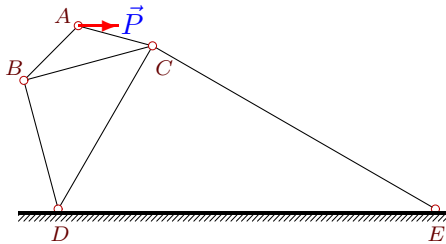
Равновесие стержневой системы

Найти математические ожидания усилий в стержнях. Дан ряд распределения вероятности случайной величины нагрузки P : $p = [0.1, 0.3, 0.4, 0.2]$.

Кирсанов М.Н. **Решебник. Теоретическая механика**/Под ред. А. И. Кириллова.– М.: ФИЗМАТЛИТ, 2008. — 384 с. (с.14.)

Задача 18.1.

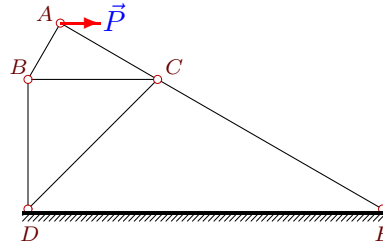
Азин Андрей



$P = [10, 12, 9, 14] \text{ кН}$
 $\angle ACB = 30^\circ$,
 $\angle ABC = 30^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 30^\circ$.

Задача 18.2.

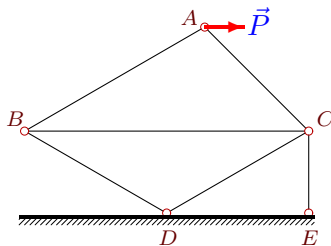
Арефин Максим



$P = [8, 10, 7, 12] \text{ кН}$
 $\angle ACB = 30^\circ$,
 $\angle ABC = 60^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 45^\circ$,
 $\angle CED = 30^\circ$.

Задача 18.3.

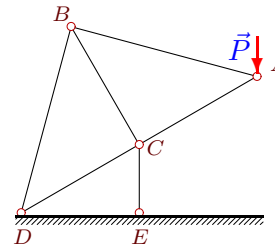
Булгакова Анна



$P = [9, 11, 8, 13] \text{ кН}$
 $\angle ACB = 45^\circ$,
 $\angle ABC = 30^\circ$,
 $\angle BDC = 120^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 90^\circ$.

Задача 18.4.

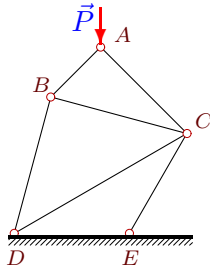
Быкова Евгения



$P = [6, 8, 5, 10] \text{ кН}$
 $\angle ACB = 90^\circ$,
 $\angle ABC = 45^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 90^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 90^\circ$.

Задача 18.5.

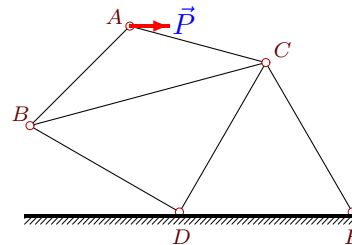
Викторов Александр



$P = [5, 7, 4, 9] \text{ кН}$
 $\angle ACB = 30^\circ$,
 $\angle ABC = 60^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 30^\circ$,
 $\angle CED = 120^\circ$.

Задача 18.6.

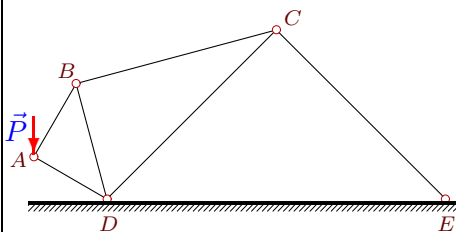
Вольнов Кирилл



$P = [9, 11, 8, 13] \text{ кН}$
 $\angle ACB = 30^\circ$,
 $\angle ABC = 30^\circ$,
 $\angle BDC = 90^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 60^\circ$,
 $\angle CED = 60^\circ$.

Задача 18.7.

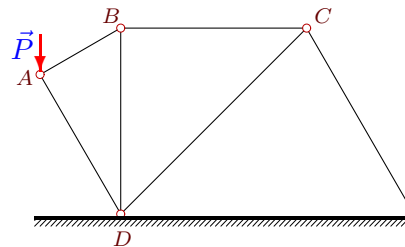
Гречко Даниил



$P = [4, 6, 3, 8] \text{ кН}$
 $\angle ABD = 45^\circ$,
 $\angle ADB = 45^\circ$,
 $\angle BDC = 60^\circ$,
 $\angle BCD = 30^\circ$,
 $\angle CDE = 45^\circ$,
 $\angle CED = 45^\circ$.

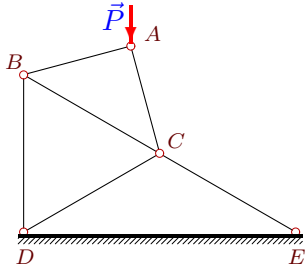
Задача 18.8.

Ермаков Данила



$P = [9, 11, 8, 13] \text{ кН}$
 $\angle ABD = 60^\circ$,
 $\angle ADB = 30^\circ$,
 $\angle BDC = 45^\circ$,
 $\angle BCD = 45^\circ$,
 $\angle CDE = 45^\circ$,
 $\angle CED = 60^\circ$.

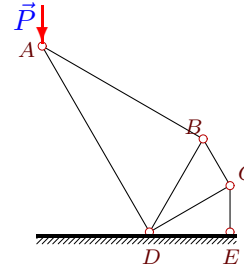
Задача 18.9.



Захаренков Иван

$P=[9,11,8,13]$ кН
 $\angle ACB=45^\circ$,
 $\angle ABC=45^\circ$,
 $\angle BDC=60^\circ$,
 $\angle BCD=60^\circ$,
 $\angle CDE=30^\circ$,
 $\angle CED=30^\circ$.

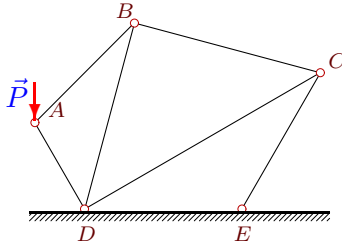
Задача 18.10.



Малагин Даниил

$P=[7,9,6,11]$ кН
 $\angle ABD=90^\circ$,
 $\angle ADB=60^\circ$,
 $\angle BDC=30^\circ$,
 $\angle BCD=90^\circ$,
 $\angle CDE=30^\circ$,
 $\angle CED=90^\circ$.

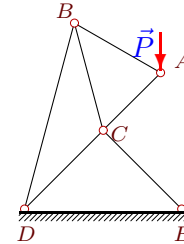
Задача 18.11.



Мартынов Антон

$P=[9,11,8,13]$ кН
 $\angle ABD=30^\circ$,
 $\angle ADB=45^\circ$,
 $\angle BDC=45^\circ$,
 $\angle BCD=45^\circ$,
 $\angle CDE=30^\circ$,
 $\angle CED=120^\circ$.

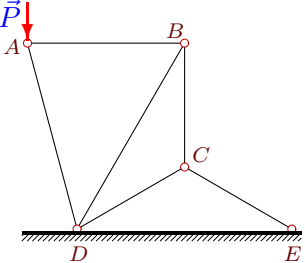
Задача 18.12.



Махматов Валентин

$P=[6,8,5,10]$ кН
 $\angle ACB=60^\circ$,
 $\angle ABC=45^\circ$,
 $\angle BDC=30^\circ$,
 $\angle BCD=120^\circ$,
 $\angle CDE=45^\circ$,
 $\angle CED=45^\circ$.

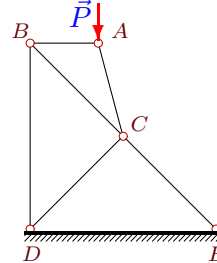
Задача 18.13.



Мелешко Павел

$P=[5,7,4,9]$ кН
 $\angle ABD=60^\circ$,
 $\angle ADB=45^\circ$,
 $\angle BDC=30^\circ$,
 $\angle BCD=120^\circ$,
 $\angle CDE=30^\circ$,
 $\angle CED=30^\circ$.

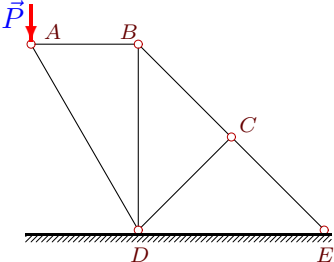
Задача 18.14.



Мохамед Али

$P=[5,7,4,9]$ кН
 $\angle ACB=30^\circ$,
 $\angle ABC=45^\circ$,
 $\angle BDC=45^\circ$,
 $\angle BCD=90^\circ$,
 $\angle CDE=45^\circ$,
 $\angle CED=45^\circ$.

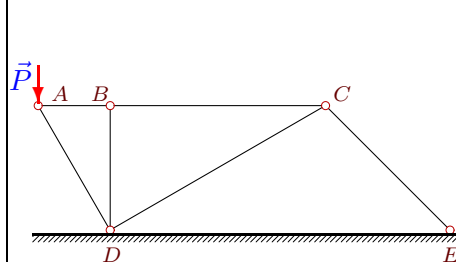
Задача 18.15.



Сионов Павел

$P=[9,11,8,13]$ кН
 $\angle ABD=90^\circ$,
 $\angle ADB=30^\circ$,
 $\angle BDC=45^\circ$,
 $\angle BCD=90^\circ$,
 $\angle CDE=45^\circ$,
 $\angle CED=45^\circ$.

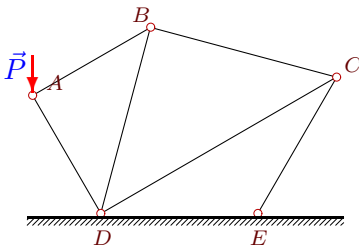
Задача 18.16.



Соколов Константин

$P=[4,6,3,8]$ кН
 $\angle ABD=90^\circ$,
 $\angle ADB=30^\circ$,
 $\angle BDC=60^\circ$,
 $\angle BCD=30^\circ$,
 $\angle CDE=30^\circ$,
 $\angle CED=45^\circ$.

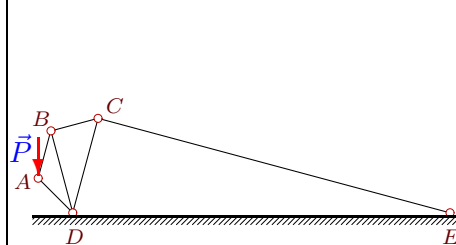
Задача 18.17.



Хохлов Александр

$P=[9,11,8,13]$ кН
 $\angle ABD=45^\circ$,
 $\angle ADB=45^\circ$,
 $\angle BDC=45^\circ$,
 $\angle BCD=45^\circ$,
 $\angle CDE=30^\circ$,
 $\angle CED=120^\circ$.

Задача 18.18.



Новиков Станислав

$P=[6,8,5,10]$ кН
 $\angle ABD=30^\circ$,
 $\angle ADB=30^\circ$,
 $\angle BDC=30^\circ$,
 $\angle BCD=60^\circ$,
 $\angle CDE=75^\circ$,
 $\angle CED=15^\circ$.