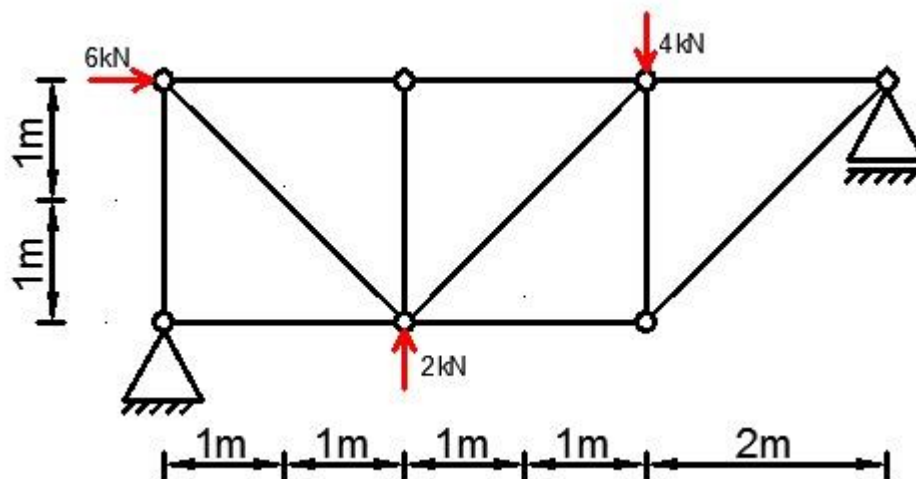


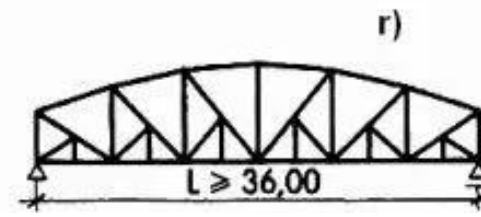
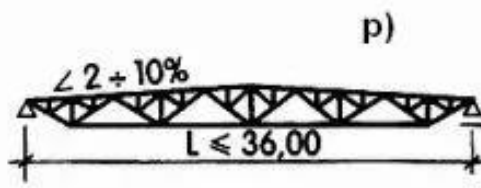
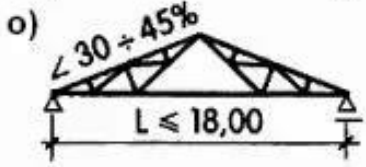
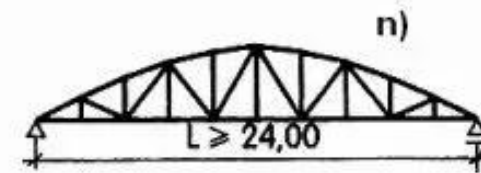
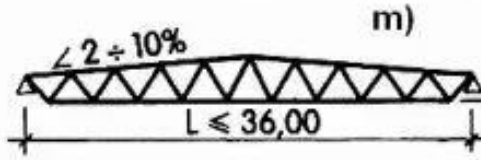
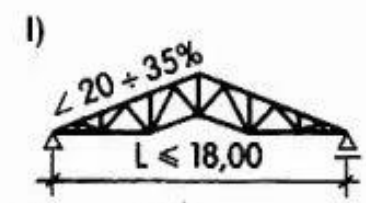
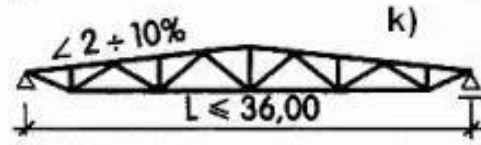
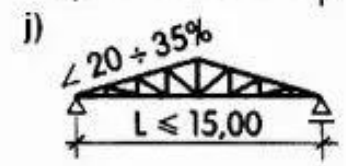
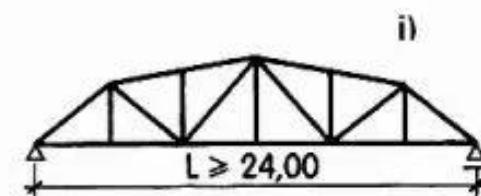
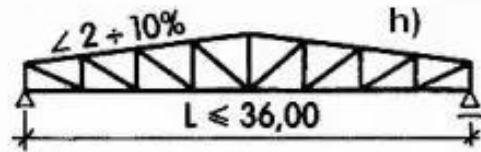
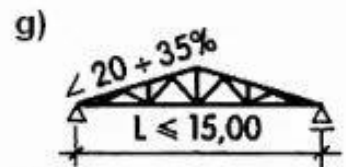
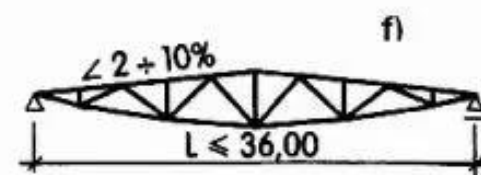
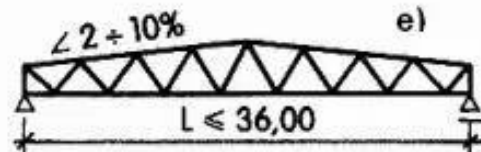
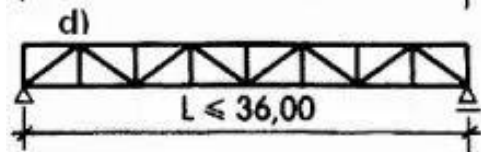
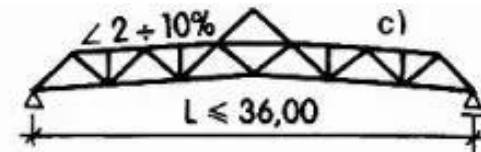
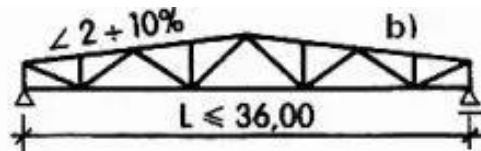
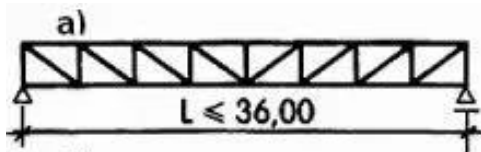
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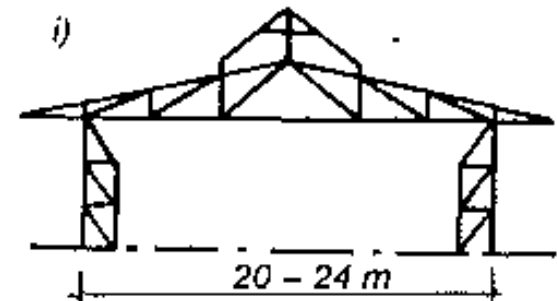
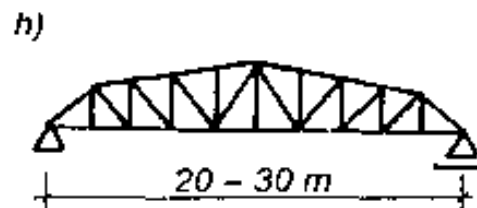
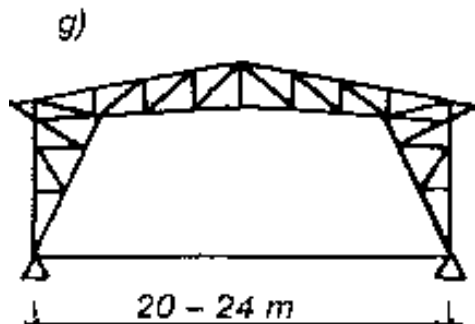
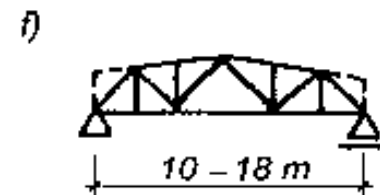
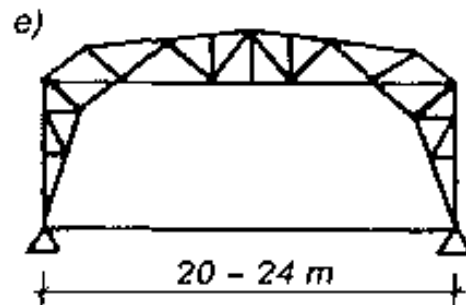
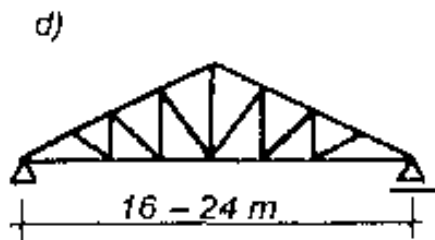
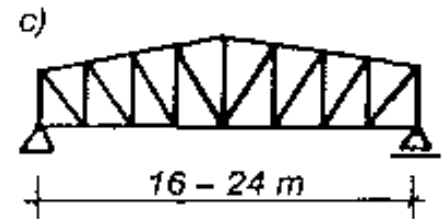
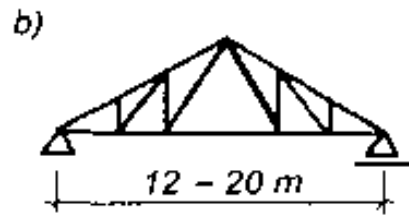
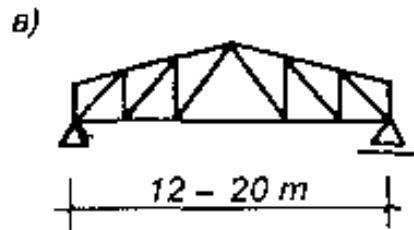
jest to geometrycznie niezmienny, odpowiednio podparty układ prętów przegubowo połączonych w węzłach.



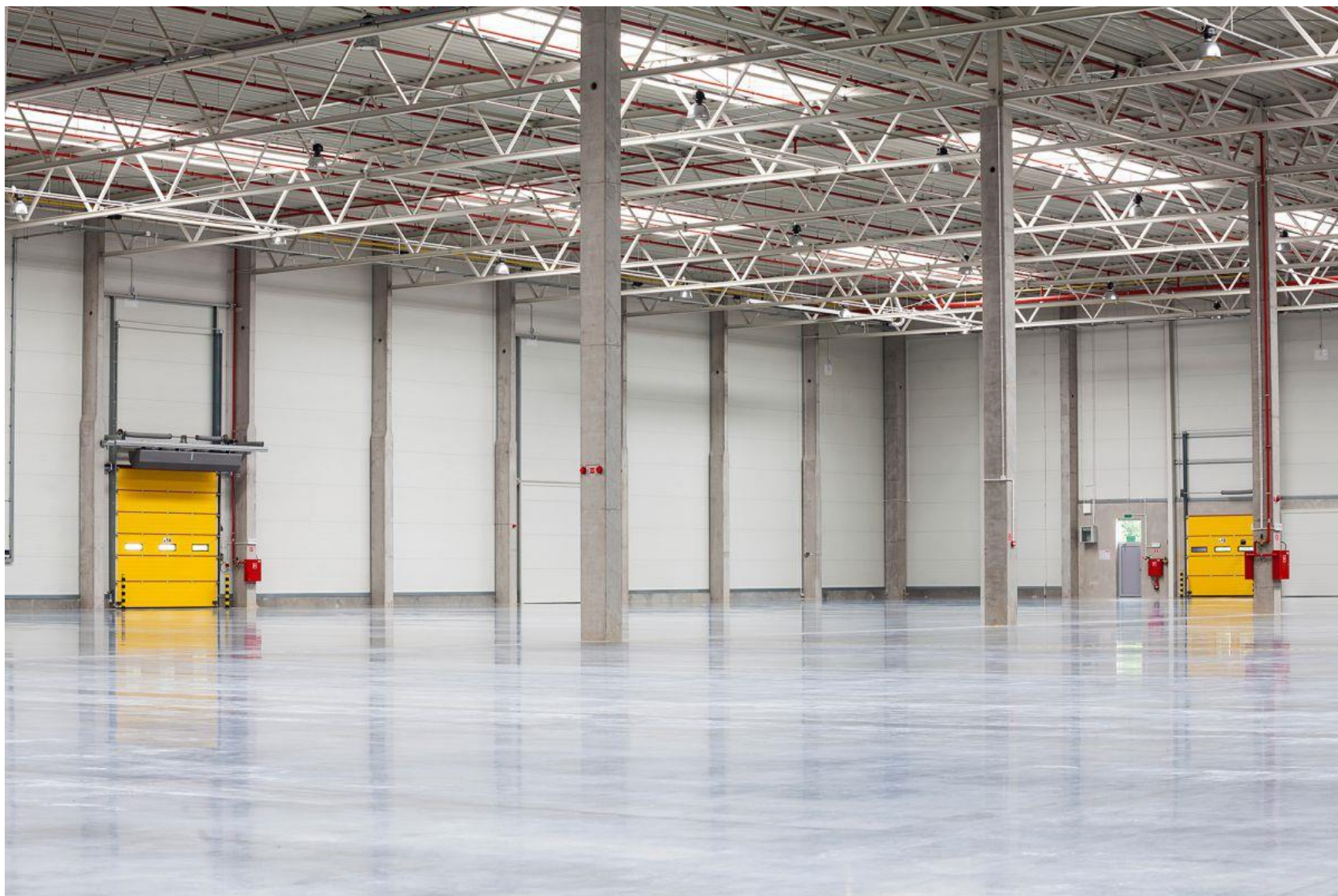
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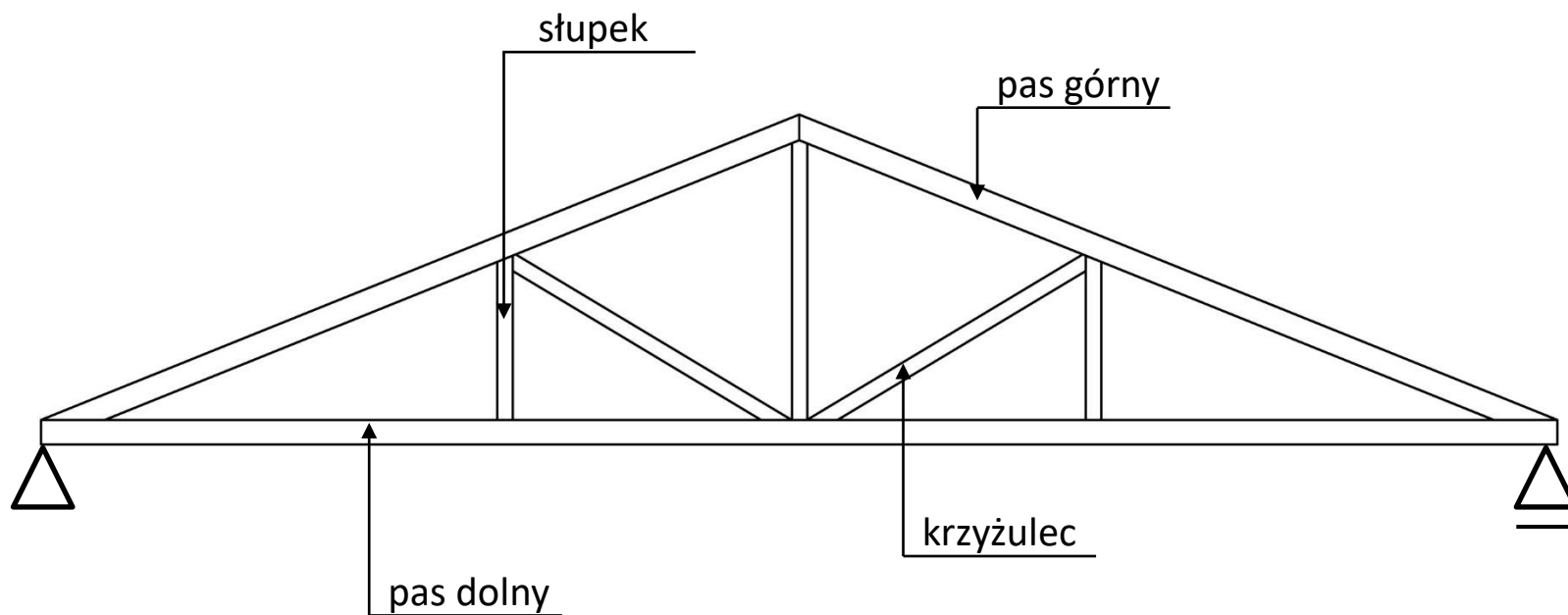
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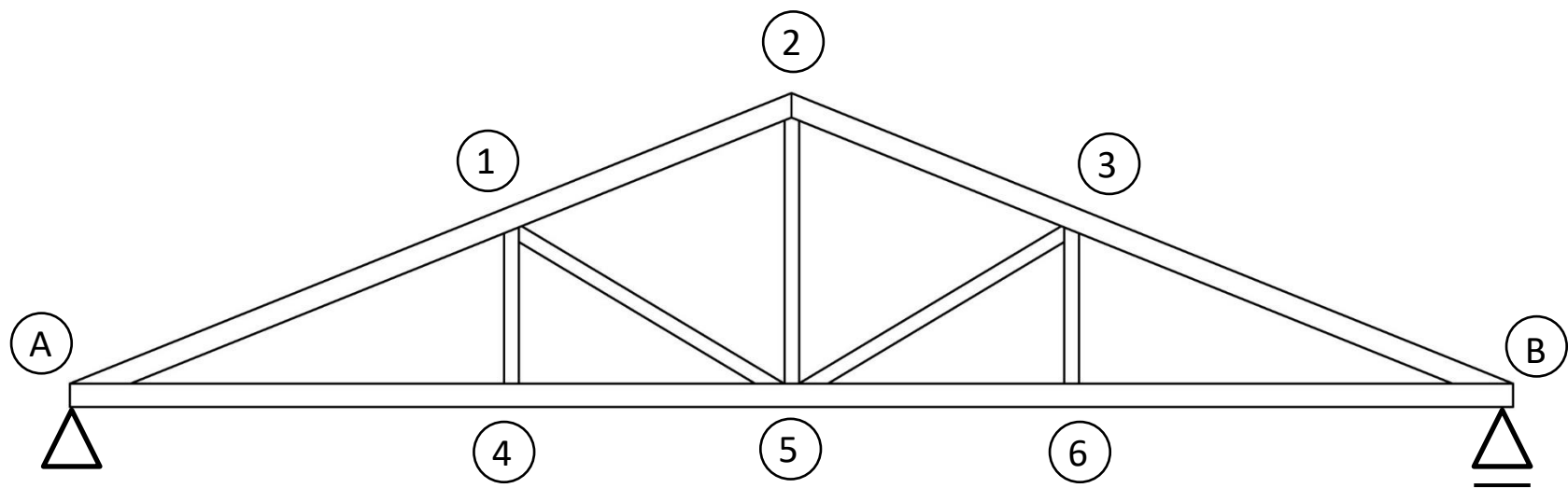
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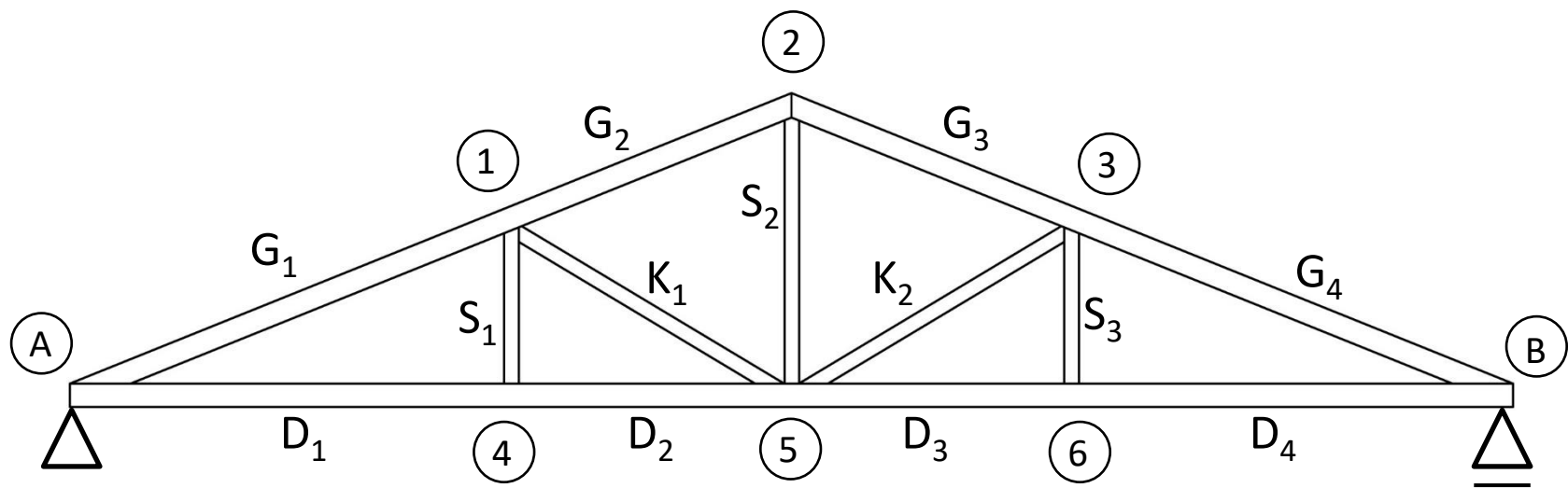
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STATYCZNA WYZNACZALNOŚĆ KRATOWNIC

$$n = r + p - 2w$$

gdzie:

r – liczba reakcji dla całego układu (kratownicy)

p – liczba prętów

w – liczba węzłów

$n = 0$ → kratownica jest statycznie wyznaczalna

$n < 0$ → kratownica jest układem geometrycznie zmiennym

$n > 0$ → kratownica jest układem przesztywnionym

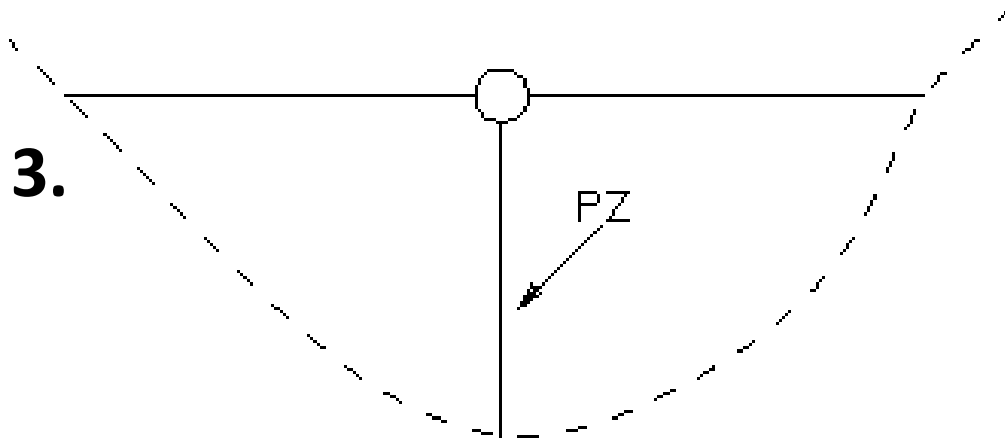
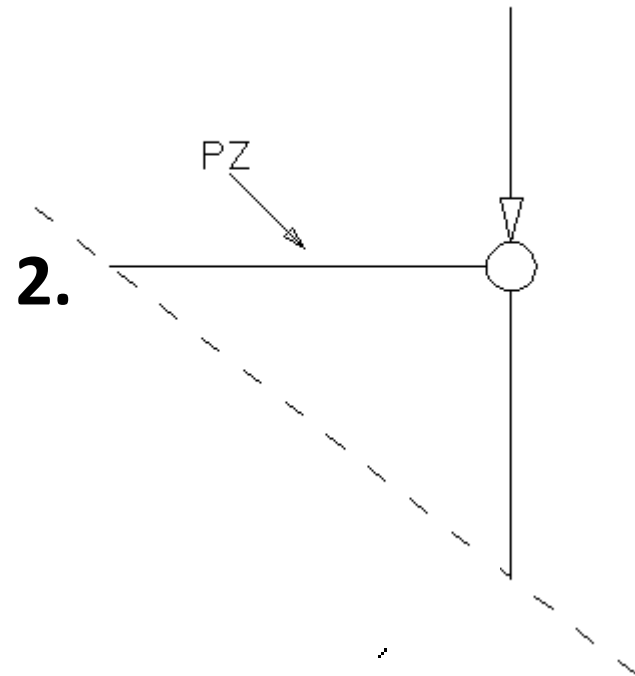
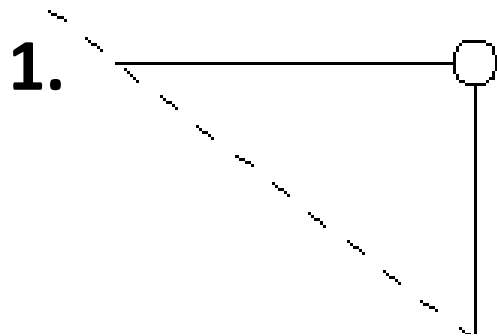
OBLICZANIE SIŁ W PRĘTACH KRATOWNIC

Obciążenie kratownic stanowią wyłącznie siły skupione przyłożone w węzłach, które wywołują w prętach kratownicy wyłącznie siły podłużne (normalne) stałe na długości pręta.

Metody wyznaczania sił w prętach:

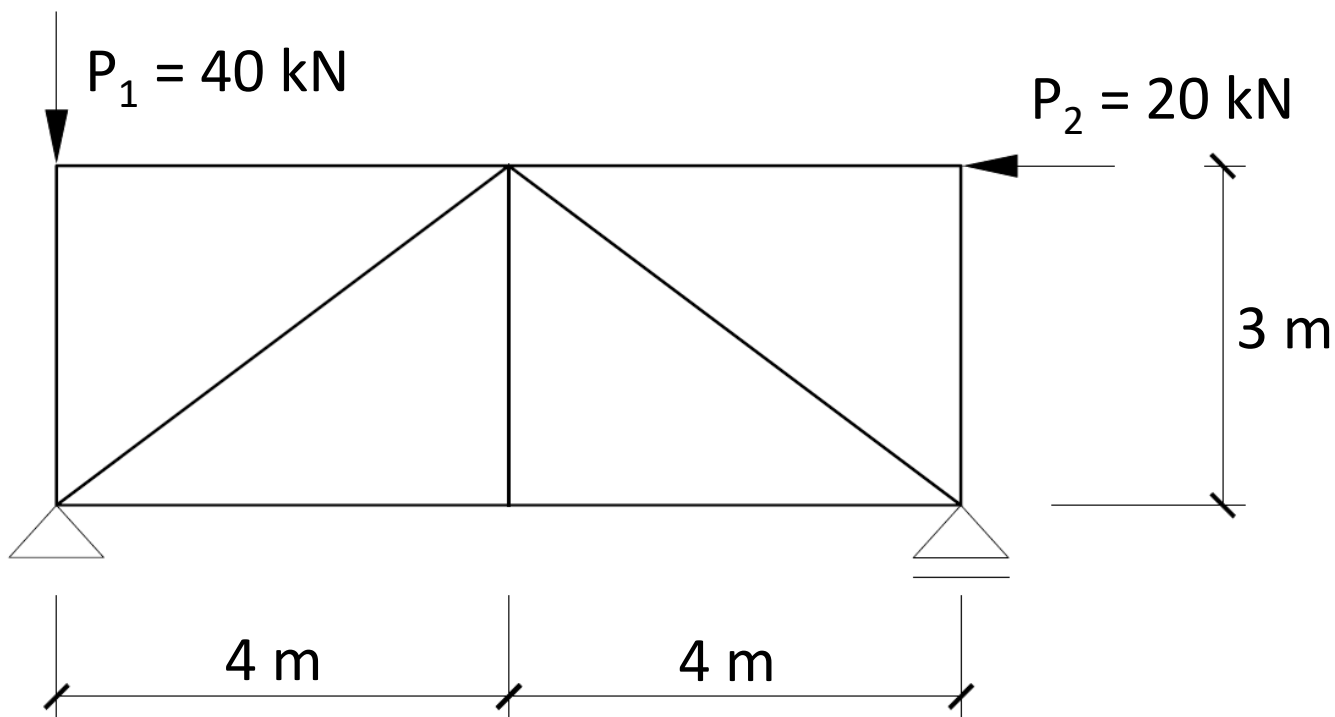
- metoda analitycznego równoważenia węzłów
- metoda Ritter'a (metoda przekrojów)
- plan sił Cremony – metoda wykreślna (geometryczna)

PRĘTY ZEROWE

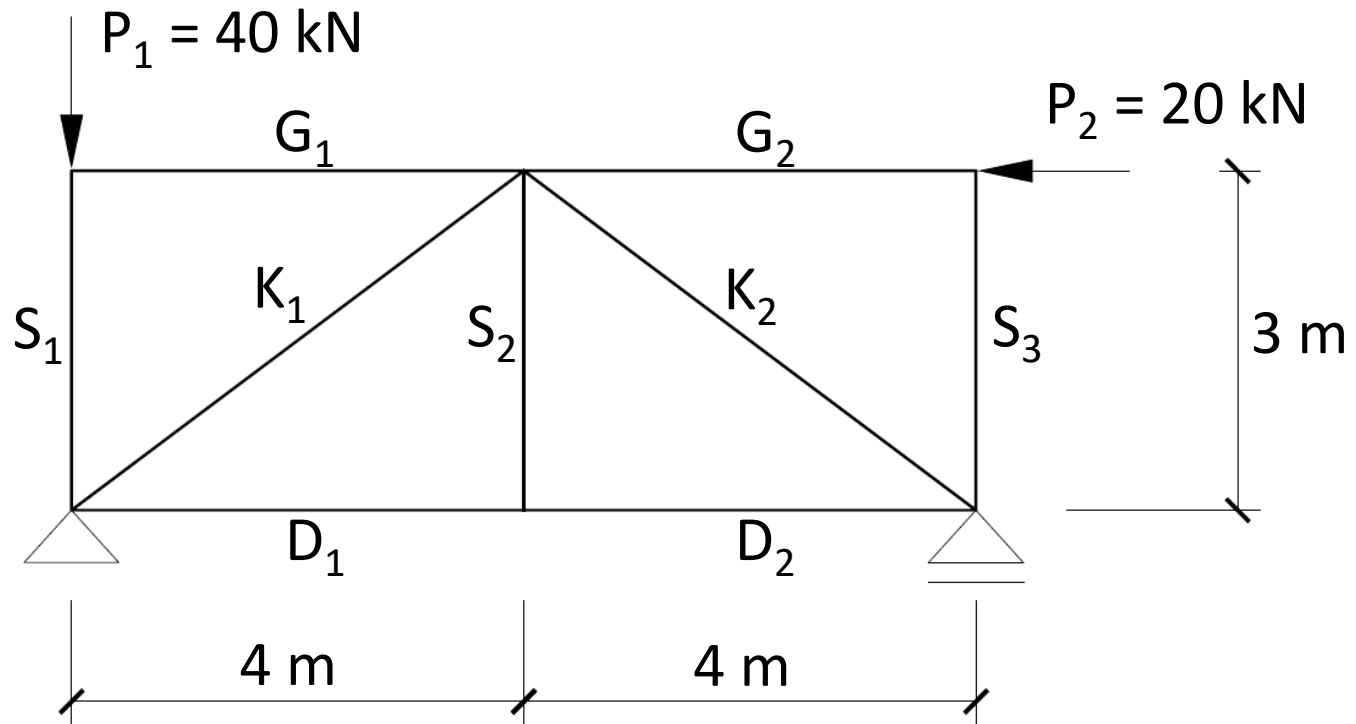


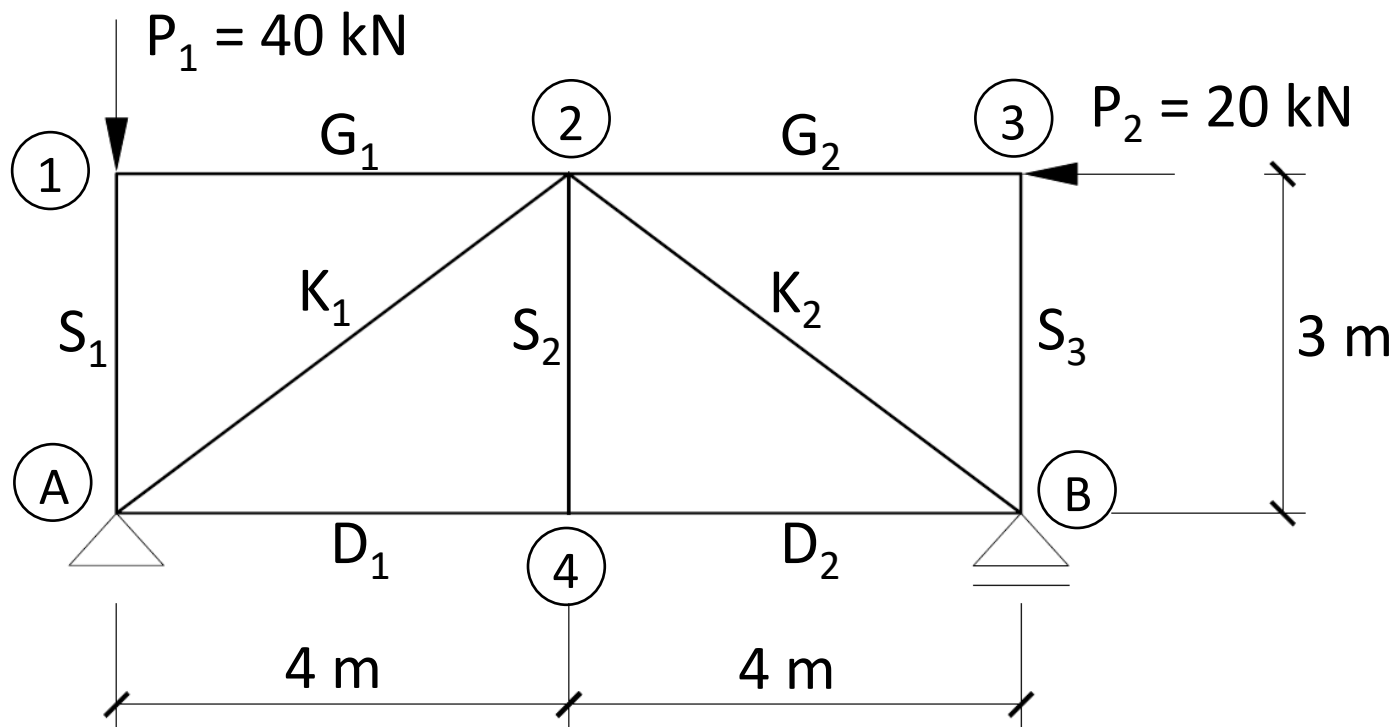
Zadanie

Wyznacz siły w prętach podanej kratownicy metodą analitycznego równoważenia węzłów.

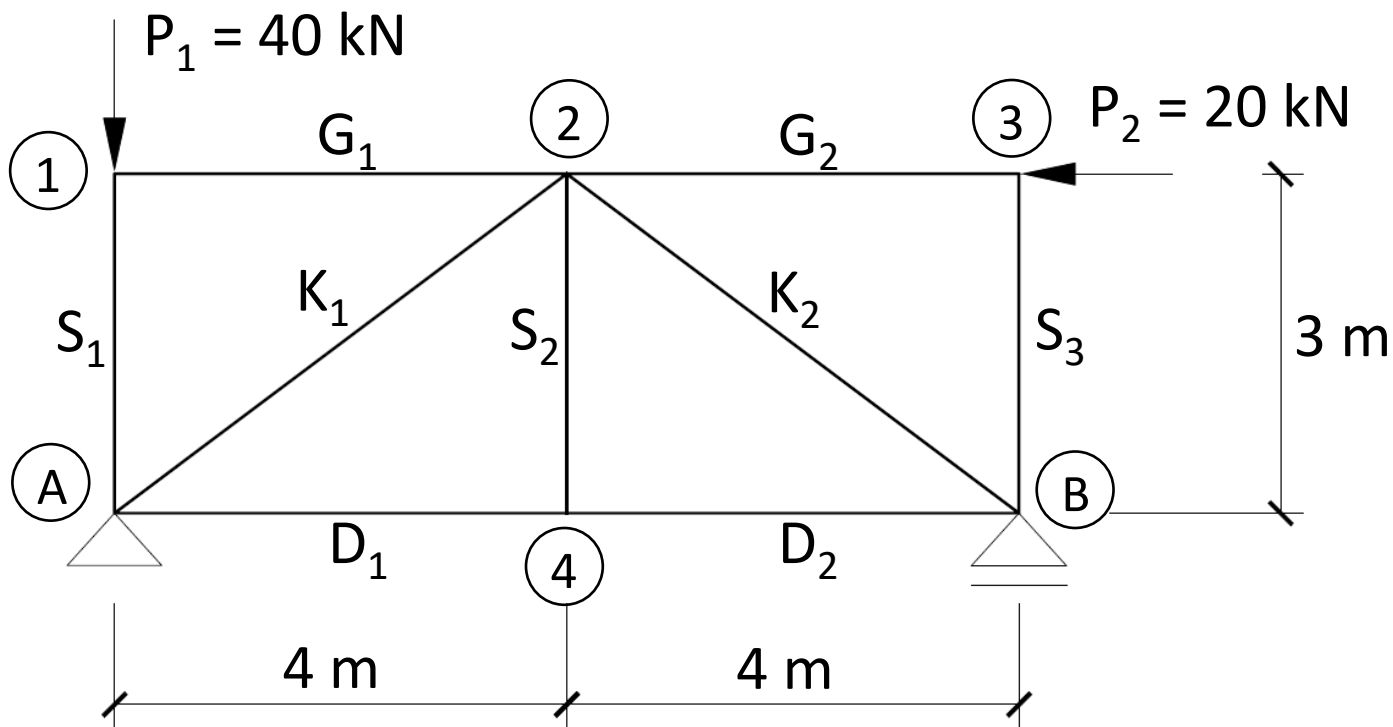


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Pręt	G_1	G_2	D_1	D_2	S_1	S_2	S_3	K_1	K_2
Siła kN	0					0	0		