

Example tasks for the PRO version

1. Prepare a loading plan by doing the calculations yourself on a piece of paper, then do the same project in the app and compare the results.

Remember that:

- if goods can stack up, not only within a group, but between each other as well;
- Loads can be rotated but only by 90 degrees relative to the base, they cannot be flipped;
- a load that is not stacked can be placed on top of one that is stacked.

a)

Cargo Space	Length	Width	Height	Quantity	Stacking
Reefer container 20'	545.2	227.5	226	-	-
Charges					
Euro pallet	120	80	100	8	YES
1/2 Euro pallet	60	80	100	10	YES
IBC container	120	100	118	8	YES

b)

Cargo Space	Length	Width	Height	Quantity	Stacking
Bus 8 EP	420	220	220	-	-
Charges					
Own load 1	90	60	50	8	YES
GitterBox	120	80	90	12	YES
Euro pallet	120	80	100	1	NO

c)

Cargo Space	Length	Width	Height	Quantity	Stacking
Truck (solo)	720	240	240	-	-
Charges					

Own load 2	90	180	50	20	YES
Own load 3	100	50	90	8	YES
Enlarged Euro pallet	120	120	100	4	NO

d)

Cargo Space	Length	Width	Height	Quantity	Stacking
Truck (solo)	720	240	240	-	-
Charges					
Own load 3	100	50	90	16	YES
Industrial pallet (ISO)	120	100	100	8	YES
Euro pallet	120	80	100	6	NO
Charge 4	50	50	50	12	NO

e)

Cargo Space	Length	Width	Height	Quantity	Stacking
Semi-trailer tarpaulin	1360	245	240	-	-
Charges					
Own load 3	100	50	90	20	YES
Own load 1	90	60	50	20	YES
Euro pallet	120	80	100	18	NO
GitterBox	120	80	90	4	NO

f)

Cargo Space	Length	Width	Height	Quantity	Stacking
Curtain semi-trailer	1360	245	270	-	-
Charges					
Euro pallet	120	80	100	16	YES
Own load 1	90	60	50	20	YES

1/2 Euro pallet	60	80	100	20	YES
IBC container	120	100	118	8	NO

g)

Cargo Space	Length	Width	Height	Quantity	Stacking
Curtain semi-trailer	1360	245	270	-	-
Charges					
Own load 3	100	50	90	48	YES
Own load 1	90	60	50	10	YES
Euro pallet	120	80	100	8	NO
1/2 Euro pallet	60	80	100	10	NO
GitterBox	120	80	90	6	NO

h)

Cargo Space	Length	Width	Height	Quantity	Stacking
Trailer mega	1360	245	300	-	-
Charges					
Enlarged Euro pallet	120	120	100	10	YES
IBC container	120	100	118	9	YES
Industrial pallet (ISO)	120	100	100	12	YES
GitterBox	120	80	90	12	YES
Euro pallet	120	80	100	12	NO

2. You have been given a transport order, but it turns out there is extra space left on the trailer and you can choose to load it. You have several options to choose from, select the one that leaves the least space (in m²).

a) **Vehicle data:** Bus 12 EP 590x230x230

Loaded data:

Euro pallet - 120x80x100 - 20 pieces - stackable

What loads can you charge to maximise space utilisation?

- A. GitterBox 120x80x90 - 3 pieces - not stackable
- B. Industrial pallet (ISO) 120x100x100 - 2 pieces - stackable
- C. Own load 5 - 90x60x50 - 12 pieces - stackable

b) **Vehicle data:** Bus 12 EP 590x230x230

Loaded data:

- GitterBox 120x80x90 - 8 pcs - stackable
- Own load 2 - 90x180x50 - 10 pcs - stackable

What loads can you charge to maximise space utilisation?

- A. ½ euro pallet 80x60x100 -13 pcs - stackable
- B. Own load 1 - 90x60x50 - 11 pcs - stackable
- C. Own load 3 - 100x150x90 - 5 pcs - stackable

c) **Vehicle data:** Truck (solo) 720x240x240

Loaded data:

- Self-loading 1 - 90x60x50 - 10 pcs - not storable
- ½ euro pallet 80x60x100 - 15 pcs - stackable

What loads can you charge to maximise space utilisation?

- A. Enlarged Euro pallet 120x120x100 - 5 pcs - not stackable
- B. IBC container 120x100x118 - 6 pcs - stackable
- C. Own load 2 - 90x180x50 - 10 pcs - stackable

d) **Vehicle data:** Truck (solo) 720x240x240

Loaded data:

- GitterBox 120x80x90 - 15 pcs - stackable
- Industrial pallet (ISO) 120x100x100 - 4 units - non-stackable

What loads can you charge to maximise space utilisation?

- A. Euro pallet - 120x80x100 - 9 pieces - stackable
- B. Own load 1 - 90x60x50 - 20 pcs - stackable
- C. Self-loading 3 - 100x150x90 - 8 pcs - not stackable

e) **Vehicle data:** Truck (solo) 720x240x240

Loaded data:

- ½ euro pallet 80x60x100 - 15 pcs - stackable
- Own load 1 - 90x60x50 - 5 pcs - stackable
- Own load 2 - 90x180x50 - 15 pcs - stackable

What loads can you charge to maximise space utilisation?

- A. GitterBox 120x80x90 - 3 pcs - not stackable
- B. Euro pallet - 120x80x100 - 6 pcs - not stackable
- C. Self-loading 3 - 100x150x90 - 8 pcs - not stackable

f) **Vehicle data:** Semi-trailer tarpaulin 1360x245x240

Loaded data:

- IBC 120x100x118 - 10 pcs - stackable

Enlarged Euro pallet 120x120x100 - 10 pcs - stackable Industrial pallet (ISO) 120x100x100 - 20 pcs - stackable

What loads can you charge to maximise space utilisation?

- A. Self-loading 3 - 100x150x90 - 9 units - non-stackable
- B. Euro pallet - 120x80x100 - 10 pcs - stackable
- C. ½ euro pallet 80x60x100 - 15 pcs - not stackable

3. Your transport company has 20 cars:

- Trailer mega 33 EP 1360x250x300 - 8 units
- Truck (solo) 720x240x240 - 5 units
- Bus 12 EP 590x230x230 - 5 units
- Semi-trailer standard 33 EP 1360x245x270 - 2 units

You have been given an order to transport a large load, which vehicles will you choose to maximise the space you assume you have to carry:

a) Cargo list:

Euro pallet 120x80x100 - 30 units - stackable 1/2
Euro pallet 60x80x100 - 70 units - stackable IBC
container 120x100x118 - 30 units - stackable

b) Cargo list:

Self loading 3 - 100x150x90 - 100 units - stackable
Euro pallet 120x80x100 - 50 units - stackable Self
loading 1 - 90x60x50 - 100 units - stackable

c) Cargo list:

Enlarged Euro pallet 120x120x100 - 45 units - non-stackable
IBC container 120x100x118 - 80 units - stackable
Own load 2 - 90x180x50 - 120 pcs - stackable

d) Cargo list:

GitterBox 120x80x90 - 25 pcs - not stackable
Industrial pallet (ISO) 120x100x100 - 40 pcs - non-stackable
Own load 5 - 90x60x50 - 120 pcs - stackable

e) Cargo list:

Euro pallet - 120x80x100 - 100 pcs - stackable
Own load 3 - 100x150x90 - 90 pcs - stackable
½ euro pallet 80x60x100 - 20 pcs - stackable

4. *You have received a transport order, but it turns out there is extra space left on the truck and you can choose to load it. You have several options to choose from, select the one that leaves the least space (in m²).*

Vehicle data: Truck 700x220x220 Trailer 700x220x220

Loaded cargo data: Own cargo-90x80x70-10 pieces-floorable Euro pallet
120x80x100-10 pieces-floorable

What loads can you charge to maximise space utilisation? Example A)

1. Pojemnik IBC-120x100x118-10szt-piętrowalne
2. ½ pallet euro-80x60x100-30 pieces-stackable
3. Gitterbox 120x80x90-10 units - stackable

Example B)

1. ½ Euro pallet 80x60x100 - 35 pieces - stackable
2. Industrial pallet 120x100x100 - 7 pieces - stackable
3. GitterBox 120x80x90 - 2 pieces - not stackable

Example C)

1. Enlarged Euro pallet - 120x120x100 - 5 pieces - not stackable
2. IBC Container - 120x100x118- 10 pieces - stackable
3. ½ pallet euro-80x60x100-30 pieces - stackable

Example D)

1. Industrial pallet 120x100x100-10 pieces - stackable
2. Gitterbox 120x80x90- 15 pieces - stackable
3. IBC Container - 120x100x118 - 5 units - stackable

Example E)

1. IBC 120x100x118 - 10 pieces - stackable
2. Enlarged Euro pallet 120x120x100 - 5 pieces - stackable
3. GitterBox 120x80x90 - 5 pieces - stackable

5. You own a vehicle and are looking for a transport order. Which loads will you choose to maximise the available space and not exceed the axle load.

Vehicle data:

Semi-trailer standard 33p 1360x245x270 Payload: 24000 kg

Axle loads:

Leading or trailing axle:

- distance from trailer [cm]: 150
- unladen weight [kg]: 3200
- Max. permissible load [kg]: 7500

Rear axle or centre of trolley:

- distance from semi-trailer [cm]: 1046
- unladen weight [kg]: 1600
- max. permissible pressure [kg]: 12700

Cargo list:

a)

Own load 80x80x80 - 50 pieces - stackable - 60 kg / piece

IBC 120x100x118 - 22 pieces - stackable - 100 kg/piece
Enlarged Euro pallet 120x120x100 - 10 pieces - stackable - 190kg/piece

b)

IBC container 120x100x118 - 10 pieces - non-stackable - 200 kg/piece
Euro pallet 120x80x100 - 35 pieces - stackable - 100 kg/piece
Own load 90x80x70 - 25 pieces - stackable - 170 kg/piece

c)

Enlarged Euro pallet 120x120x100 - 10 pieces - stackable - 200 kg/pc
Gitterbox 120x80x90 - 20 pieces - stackable - 250 kg/pc
Industrial pallet (ISO) - 120x100x100 - 20 pieces - 170 kg/pc

d)

½ Euro pallet 80x60x10 - 20 pieces - non-stackable - 100 kg/piece
Euro pallet 120x80x100 - 40 pieces - stackable - 250 kg/piece
GitterBox 120x80x90 - 13 pieces - stackable - 80 kg/piece

e)

Enlarged Euro pallet 120x120x100 - 15 pieces - stackable - 150kg/pc
Own load 100x80x90 - 20 pieces - stackable - 60kg/pc
½ Euro pallet 80x60x10 - 25 units not stackable - 45 kg/pc

5. *Your company has 3 cars and 3 trailers:*

Cars:

- Semi-trailer mega 33 EP 1360x245x300 5000kg
- Semi-trailer standard 33 EP 1360x245x270 4800kg
- Truck (solo) 720x240x240 2500kg

Trailers:

- Trailer 1 1200x245x270 payload: 5000 kg
- Trailer 2 850x245x240 payload: 2200 kg
- Trailer 3 1300x250x300 payload: 5350 kg

You have been given an order to transport a large load, which of your vehicles and trailers will you choose to maximise their surface area (in m²) assuming you have the following loads to transport. Take care not to exceed the permitted load capacity.

a) Cargo list:

Industrial pallet (ISO) 120x100x100 - 50 kg/piece - 30 pieces - stackable
Own load 1 90x60x50 - 15kg/piece - 160 pieces - stackable
Euro pallet 120x80x100 - 40kg/pc - 15 pieces - non-stackable

b) Cargo list:

½ Euro pallet 80x60x100 - 25kg/pc - 75 pieces - stackable
Enlarged Euro pallet 120x120x100 - 70 kg/pc - 15 pieces - stackable

IBC 120x100x118 - 80kg/pc - 18 units - non-bunkered

c) Cargo list:

Own load 3 100x150x90 - 50kg/piece - 20 pieces - stackable

Own load 1 90x60x50 - 15kg/piece - 75 pieces - stackable

GitterBox 120x80x90 - 65kg/piece - 25 pieces - stackable

d) Cargo List:

Own load 90x180x50 20 kg/piece - 23 pieces - stackable

Enlarged Euro pallet 120x120x100 - 50 kg/piece - 20 pieces - stackable

Industrial pallet (ISO) 120x100x100 - 40kg/pc - 26 pieces - non-stackable

e) Cargo List:

IBC 120x100x118 - 70kg/unit - 25 units - non-stackable

Cargo box 90x60x50 15kg/unit - 200 units - stackable GitterBox

120x80x90 40kg/unit - 10 units - stackable