Assembling Wardrobes

Abstract

When writing a manual, many possible scenarios have to be considered. The students assume the roles of technical writers and come up with possible problems that might occur when assembling wardrobes. Doing this, they will not focus on single issues but try to come up with more general responses to the problems.

Using cardboard models, they develop problem solving solutions. The aim of the task is to determine the minimal room height until which an assembled wardrobe can still be tilted.

Fig. 1: Wardrobe (mascil-Team Austria)

Tag

Discipline: Mathematics

Target group: Lower Secondary Education

Age range: 12–13

Duration: 100 min.

Inquiry-based learning:

- Exploring situations ✓
- Planning investigations
- Experimenting systematically ✓
- Interpreting and evaluating ✓
- Communicating results ✓

World of Work:

- **Becoming a(n):** Technical writer.
- **Context:** Technical writer/Furniture manufacturing and industry.
- **Role:** Students assume the roles of technical writers.
- **Activity:** The students develop a strategy/formula in order to be able to finish larger order more quickly.
- **Product:** A formula or program to calculate the respective minimal height.

Problem

You are a technical writer working for a large furniture store. Tomorrow you will receive a long list of sizes (height, width, depth) for a new series of wardrobes. The wardrobes can be either assembled on the floor or in an upright position against the wall. Your supervisor expects you to be able estimate quickly which minimal room height is needed for the wardrobes to be assembled on the floor.

Use the provided material to develop possible solutions.

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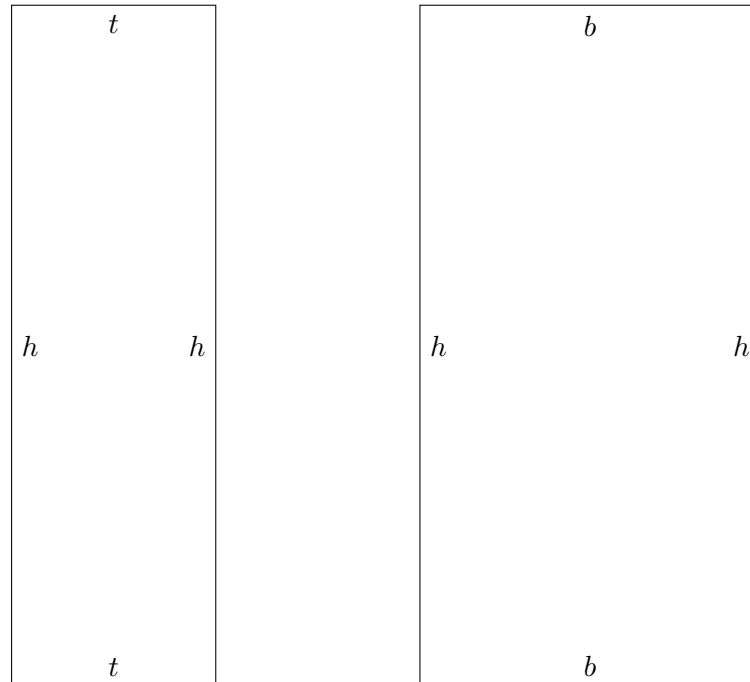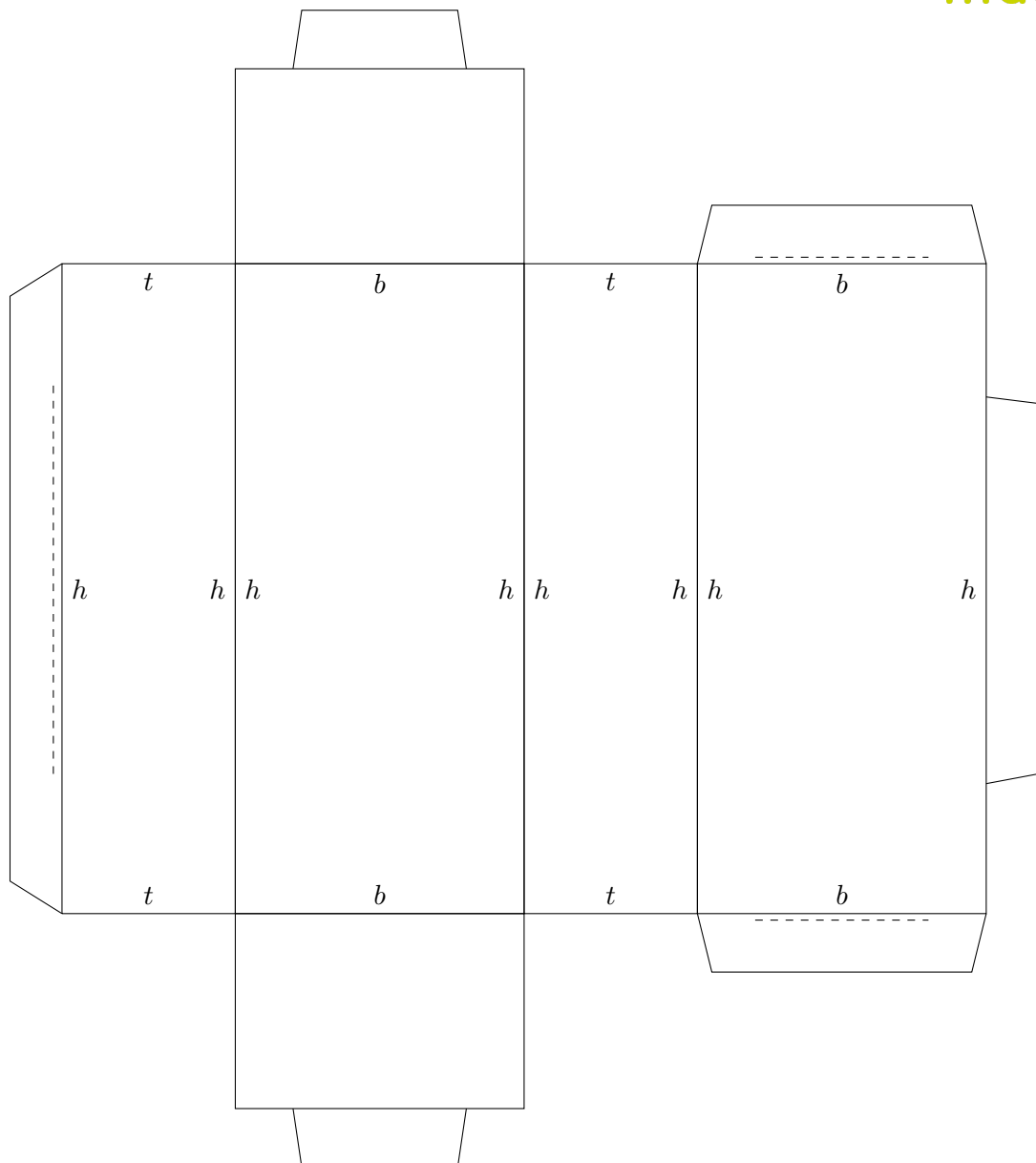
Supplementary Material

- Assembly instruction of the wardrobe frame PAX from IKEA: Assembly instruction [last accessed on 15.9.2016]

- Table with data from different wardrobes

Name	Width in cm	Deepth in cm	Height in cm
Brimes	78	50	190
Brusali	131	57	190
Hemnes	120	59	197
Askvoll	80	52	189
Trysil	154	60	205
Tyssedal	88	58	208
Undredal	102	62	203
Aneboda	81	50	180
Dombas	140	51	181
Hurdal	109	50	137
Herefoss	105	52	198
Kvkne	120	57	190
Morvik	120	60	205
Fjell	110	64	208
Odda	120	55	200
IKEA PS 2014	101	60	187
Nornaes	56	44	202
Briem	80	55	180
PAX I	50	60	236.4
PAX II	100	60	236.4

Reference: IKEA Wardrobes (selection) [last accessed on 15.9.2016], als csv-File

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