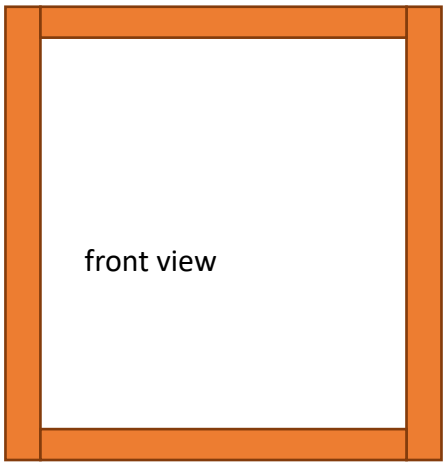
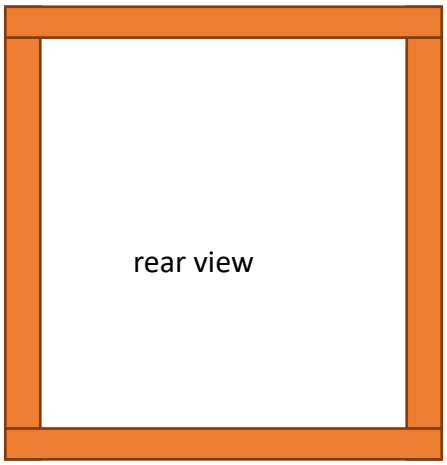
Wood and glass

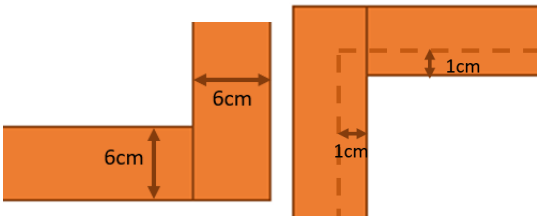
(English from page 3)

Sovelluksella lasketaan, paljonko tarvitaan puuta ja lasia yhteen ikkunaan ja useampaan samankokoiseen ikkunaan. Ohessa on kuva ikkunan nurkasta. Toiset kuvat näyttävät, miten ikkuna on rakennettu. Ikkunan lasi on ikkunan pokien välissä.





Puun leveys on 6cm. Ikkunan lasi on on 1 cm ikkunan kehyksen sisällä.



Kun tiedetään ikkunan korkeus ja leveys, niin voidaan laskea puun ja lasin määrä yhtä ikkunaa kohti. Yhden ikkunan materiaalitarpeen perusteella voidaan laskea useamman samanlaisen ikkunan materiaalitarve.

Lataa ja pura projekti Moodelsta. Luo JavaScript-tiedosto js-kansioon. Js-tiedoston nimi on oma sukunimesi. Ota se käyttöön index-tiedostossa body-elementin lopussa. Kirjoita oma nimesi kommenttina js-tiedoston alkuun. Kirjoita ohjelmakoodi js-tiedostoon.

Lue syöttötiedot numeerisena. Ei tarvitse varmistaa, että input-elementtiin on syötetty jotakin.

Muista noudattaa yleisiä JavaScript-koodauksen tyyliohjeita. Koodaustyyli arvioidaan myös. Älä muuta index.html-tiedoston koodia. Palautat vain js-tiedoston.

Example results

Window calculations

Window height (cm) 120
Window width (cm) 180
Window amount 4
Calculate

One window

Amount of wood needed: 11.52 m
Amount of glass needed: 1.87 m^2

Set of windows

Amount of wood needed: 46.08 m
Amount of glass needed: 7.48 m^2

Window calculations

Window height (cm) 125
Window width (cm) 90
Window amount 3
Calculate

One window

Amount of wood needed: 8.12 m
Amount of glass needed: 0.92 m^2

Set of windows

Amount of wood needed: 24.36 m
Amount of glass needed: 2.76 m^2

Window calculations

Window height (cm) 135
Window width (cm) 110
Window amount
Calculate

No amount. 1 assumed

One window

Amount of wood needed: 9.32 m
Amount of glass needed: 1.25 m^2

Set of windows

Amount of wood needed: 9.32 m
Amount of glass needed: 1.25 m^2

Error messages

When an error happens no calculations will be done and no results of previous calculations should be visible.

Window calculations

Window height (cm) 1000
Window width (cm) 100
Window amount
Calculate

Maximum height and width of window is 200cm.

One window

Amount of wood needed: m
Amount of glass needed: m^2

Set of windows

Amount of wood needed: m
Amount of glass needed: m^2

Window calculations

Window height (cm) 100
Window width (cm) 45
Window amount 12
Calculate

Minimum height and width of window is 50cm.

One window

Amount of wood needed: m
Amount of glass needed: m^2

Set of windows

Amount of wood needed: m
Amount of glass needed: m^2

Window calculations

Window height (cm) 100
Window width (cm) 100
Window amount 12
Calculate

No more than 10 equal size windows

One window

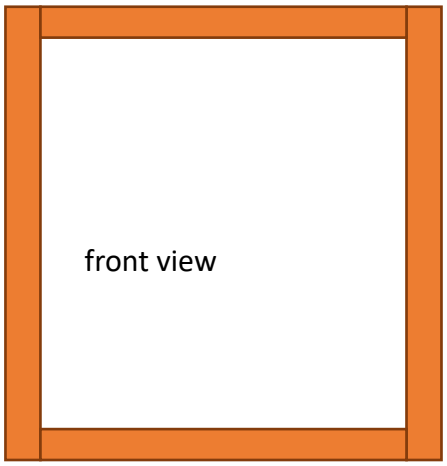
Amount of wood needed: m
Amount of glass needed: m^2

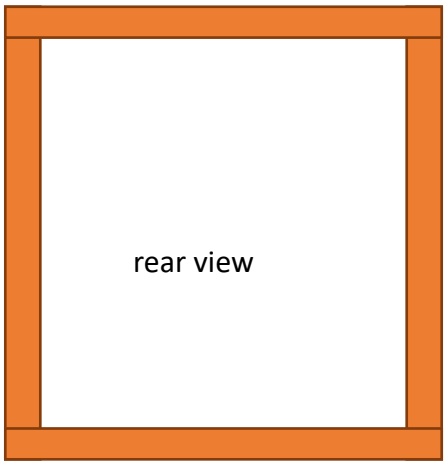
Set of windows

Amount of wood needed: m
Amount of glass needed: m^2

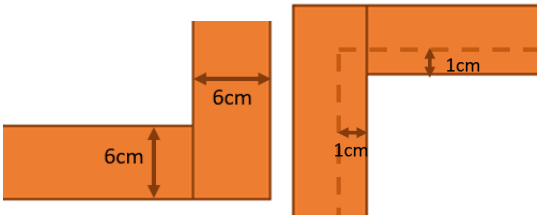
Wood and glass

The application calculates how muc wood and glass is needed for a window or a set of windows. Below is an image of the window corner. The other images show the way the wood pieces are used to form a window. The glass is between the two wood rectangles.





The width of the wood is 6cm. The window glass is 1 cm in the wood frame.



Based on the window height and widht the application calclulates the amount of wood and glass needed for one window. Based on one window material it can calculate the amount for several windows.

Load and unzip the project from Moodle. Create JavaScript file in the js folder. The name of it is your surname. Take it in use in the index file at the end of the body element in the index file. Write your name as a comment at the begnning of the js file. Write the program code in the js file.

You can read the input values as number. You do not need to check that input element is empty.

Remember to follow the common coding style of JavaScript. The coding style is to be evaluated. Do not change the index file code. You will submit only the js file.

Example results

Window calculations

Window height (cm) 120
Window width (cm) 180
Window amount 4
Calculate

One window

Amount of wood needed: 11.52 m
Amount of glass needed: 1.87 m^2

Set of windows

Amount of wood needed: 46.08 m
Amount of glass needed: 7.48 m^2

Window calculations

Window height (cm) 125
Window width (cm) 90
Window amount 3
Calculate

One window

Amount of wood needed: 8.12 m
Amount of glass needed: 0.92 m^2

Set of windows

Amount of wood needed: 24.36 m
Amount of glass needed: 2.76 m^2

Window calculations

Window height (cm) 135
Window width (cm) 110
Window amount
Calculate

No amount. 1 assumed

One window

Amount of wood needed: 9.32 m
Amount of glass needed: 1.25 m^2

Set of windows

Amount of wood needed: 9.32 m
Amount of glass needed: 1.25 m^2

Error messages

When an error happens no calculations will be done and no results of previous calculations should be visible.

Window calculations

Window height (cm) 1000
Window width (cm) 100
Window amount
Calculate

Maximum height and width of window is 200cm.

One window

Amount of wood needed: m
Amount of glass needed: m^2

Set of windows

Amount of wood needed: m
Amount of glass needed: m^2

Window calculations

Window height (cm) 100
Window width (cm) 45
Window amount 12
Calculate

Minimum height and width of window is 50cm.

One window

Amount of wood needed: m
Amount of glass needed: m^2

Set of windows

Amount of wood needed: m
Amount of glass needed: m^2

Window calculations

Window height (cm) 100
Window width (cm) 100
Window amount 12
Calculate

No more than 10 equal size windows

One window

Amount of wood needed: m
Amount of glass needed: m^2

Set of windows

Amount of wood needed: m
Amount of glass needed: m^2