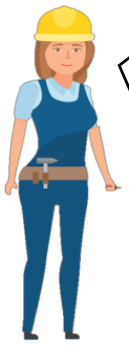
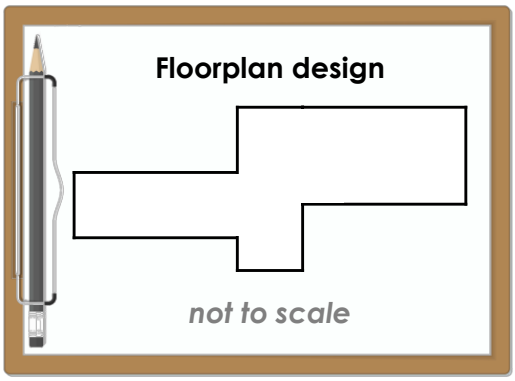
Area and Perimeter

1. Belinda the Builder is building a new house, however, the customer has made some specific requests.

Belinda has drawn a potential design for the floorplan below and says,



> **The total perimeter of the floorplan of the house needs to be between 100m and 160m.**
>
> **The total area of the floorplan of the house must not exceed 650m^2.**



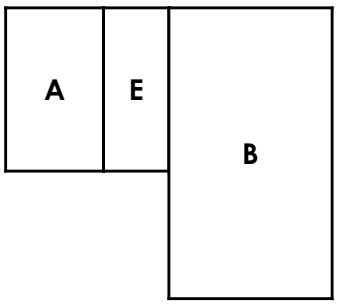
Explore the different measurements that would match the customer's requests.

DP

2. A new dog park is being designed, but the design is limited to the use of the rectangles shown in the table below.

Rectangle	Width	Length
A	650cm	3m
B	11.51m	500cm
C	6.5m	350cm
D	750cm	5.55m
E	6.5m	1.5m

Design 1



not to scale



Investigate which rectangles can be joined together in order to create a compound shape that has a total perimeter greater than 35.5m, but less than 70.55m, and a total area that is greater than 80.5m^2, but less than 109cm^2.

You must use at least 3 different rectangles in your design, and when joining your rectangles together, they must not overlap. A potential design is shown above.

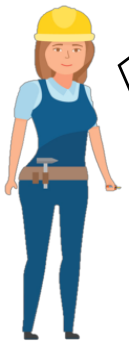
DP

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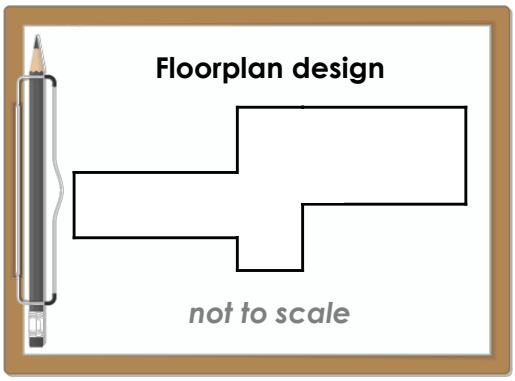
Area and Perimeter

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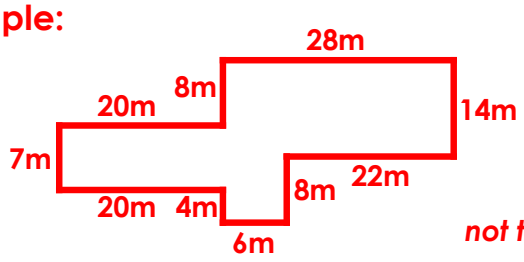


> **The total perimeter of the floorplan of the house needs to be between 100m and 160m.**
>
> **The total area of the floorplan of the house must not exceed 650m².**



Explore the different measurements that would match the customer's requests.

Various answers, for example:
Total perimeter = 137m.
Total Area = 562m².

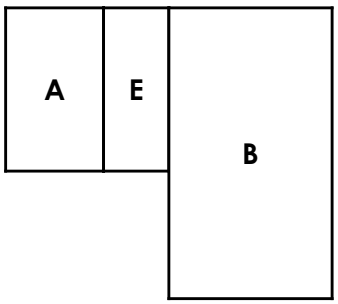


DP

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Design 1





Investigate which rectangles can be joined together in order to create a compound shape that has a total perimeter greater than 35.5m, but less than 70.55m, and a total area that is greater than 80.5m², but less than 109cm².

You must use at least 3 different rectangles in your design, and when joining your rectangles together, they must not overlap. A potential design is shown above.

Various answers, for example:
For the shape shown above, the total perimeter is 42.02m and the area is 86.8cm².

DP

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