Exercise duration: ~15 minutes

Challenge exercise: Control cupboard doors with formulae

Create a series of parameters to control cupboard doors when the cupboards' width and height are changed.

Complete the required activities:

- Open the supplied ***Office Cupboard.rfa.***

- Create a series of formulae to control the cupboard doors maintaining a 1/8" gap as shown in figure 1.

- Name and organize new parameters for ease of use and consistency.

- Amend the cupboard width and height as shown below:

    o Cupboard Width = 38"
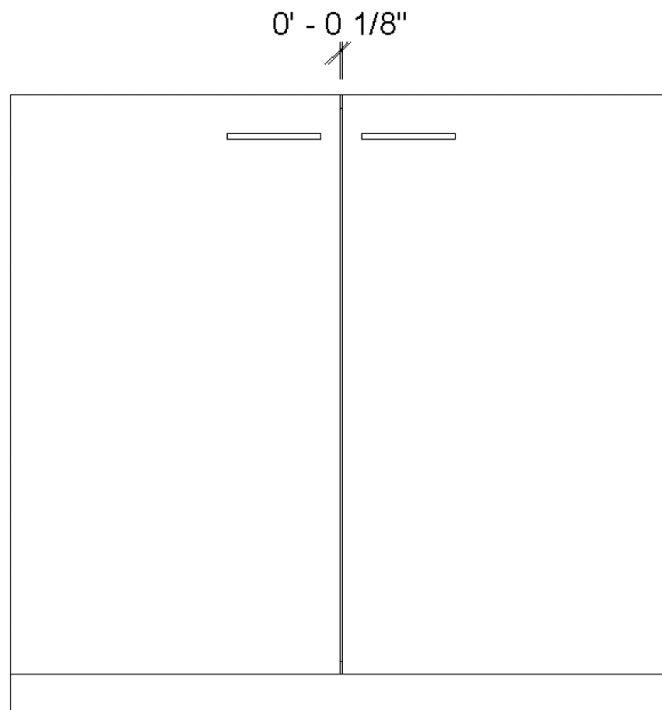
    o Cupboard Height = 24"
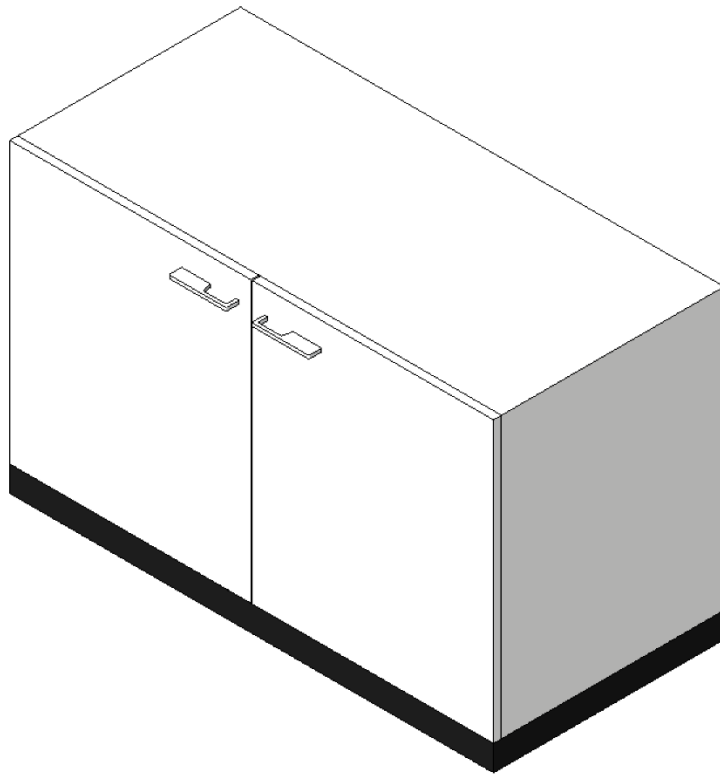
Figure 1. Office Cupboard front elevation

Challenge exercise: Control cupboard doors with formulae   Page | 1

Figure 2. Target family

Assessment Criteria

The finished exercise is available for comparison in the file *Office Cupboard_Complete.rfa.* Note that variations on the formulae are all acceptable as long as the math is accurate.

Accuracy – 50% (-5% for each incorrect type)

- The 1/8" gap between the doors has been maintained.
- The new values for cupboard width and cupboard height are set to 38" and 24".
- The door height and width have their parameters associated.
- The doors correctly resize when new dimensions for the cupboard width and height are entered.

Formulae – 50% (-5% for each incorrect type)

- The student has created appropriate and consistent parameter names such as Door Height or Panel Height.
- The mathematics of the formulae work as required.
- The parameters have been reordered for consistency and ease of use.

Dimensions			
Cupboard Width	4' 0 1/8"	=	☐
Cupboard Height	2' 0"	=	☐
Cupboard Depth	1' 6 1/8"	=	☐
Door Width	2' 0"	= (Cupboard Width / 2) - 0' 0 1/16"	☐
Door Height	1' 10"	= Cupboard Height - Plinth Height	☐
Panel Thickness	0' 0 5/8"	=	☐
Plinth Height	0' 2"	=	☐