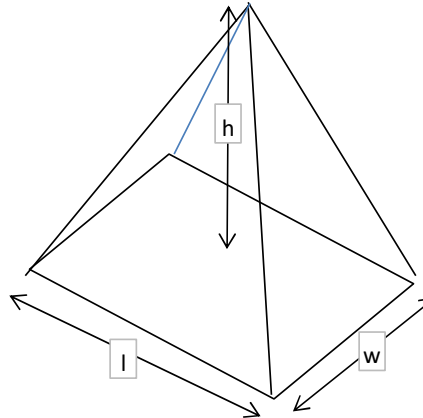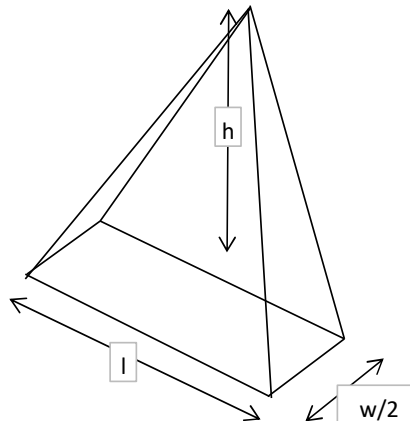| SKM Planning & Design	Project	**25 Marlborough Avenue**		Project no **SKMPD/25MA**	
	Part of Structure Hip to gable volume calc			Page **1**	of **1**
	Drawing Ref	Prepared SKM	Date	Rev N/a	Date N/a
	Subject				

for a rectangular pyramid

Volume = (l * w * h) / 3

for half a rectangular pyramid

Volume = (l * (w/2) * h) / 3

Hip to gable volume = prism comprising gable side face, less half pyramid

Triangular Prism Volume Proposed (including existing pitch):

Gable external height	3.575	m
Gable base external length (overall house depth)	8.07	m
Prism length (distance from gable wall to original ridge)	4.085	m
Volume of triangular prism = 0.5*h*b*l	58.93	m3

Half Rectangular Pyramid Volume (volume of existing pitch):

w/2 i.e. distance from gable wall to original ridge	4.085	m
l (i.e gable base)	*8.07*	m
h (same as height of gable)	3.575	m
Volume	39.28442	m3

Net additional volume required for hip to gable   **19.64221**   **m3**

Volume available for dormer (50m3 allowance)	30.36	m3