Daisy Combinations

	Combinations	Total
One number	a,b,c,d,e,f	6
Two numbers		
Three numbers		
Four numbers		
Five numbers		
Six numbers		
Total		

So the total is an upper limit on the maximum but is it actually possible? I think we can prove not …

Daisy Combinations

	Combinations	Total
One number	a,b,c,d,e,f	6
Two numbers	a+b,a+f,a+e, b+c,b+f,c+d,c+f,d+e,d+f,e+f	10
Three numbers	a+b+f, a+b+e, a+b+c, b+c+f, b+c+d, c+d+f, c+d+e, d+e+f, d+e+a, a+e+f, e+f+b, e+f+c, f+a+c, f+a+d, f+b+d,	15
Four numbers	a+b+c+d, a+b+c+e, a+b+c+f, a+c+d+e, a+c+d+f, a+c+e+f, a+d+e+f, a+b+d+e, a+b+d+f, a+b+e+f, b+c+d+e, b+c+d+f, b+c+e+f, b+d+e+f, c+d+e+f	15
Five numbers	a+b+c+d+e, a+b+c+d+f, a+b+c+e+f, a+b+d+e+f, a+c+d+e+f, b+c+d+e+f	6
Six numbers	a+b+c+d+e+f	1
Total		53

So 53 is an upper limit on the maximum but is 53 actually possible? All the options above would have to lead to different answers. This is only possible if you use the numbers 1,2,4,8,16,32, but this won't work as they are not all next to each other.