You must choose a version to submit

Alternatively, write (ie. f = prod.)

$f = Pr[z, Cn[sum\ id^3_1, id^3_3]]$ ~~$(x_1, x_2, f(x_1, x_2))$~~

Use this to define h

$h = Pr[Cn[f\ id^2_1\ id^2_2], Cn[sum[id^4_4\ id^4_2]]$ ~~$(x_1, x_2, x_3, h(x_1, x_2, x_3))$~~

Then f, g and h are defined in terms of the z, id, and sum functions as required (I hope. If I haven't got this right, can you explain the point fully).

Its fine but dont mix up the function h with the image $h(x \cdots y)$ which incidentally should not involve $h(x \cdots)$ in the definition!