

## Yule Be Wondering

My 3 perfectly cylindrical Christmas logs of radius ( $r$ ), lie perfectly snug against each other and to the sides of my perfectly semi-circular tiled fireplace of width ( $a$ ).

Ah nice! A perfect Christmas except that it turns out that

$$a = 4r \left(1 + \frac{a}{y}\right)$$

which due to Health & Safety regulations means Santa won't be coming down my chimney. Do you know why?

