Consumption calculation

Math-1

Given that,

½ chest = 55 cm

L = 72 cm

SL = 18 cm

GSM = 140

wastage, Wx. = (100 − 86) = 14%

Neck width = 18 cm

Rib height = 10.5 cm

GSM of Rib = 220

∴ Body fabric consumption = $\frac{L+SL+AL}{100} * \frac{\frac{1}{2}C+AL}{100} \times \frac{GSM}{1000} \times 2 \times 12 + Wx.$

$= \frac{72+18+10}{100} \times \frac{55+4}{100} \times \frac{140}{1000} \times 2 \times 12 + 14\%.$

$= 1.98 + 0.28$

$= 2.26$ kg/dozen

width = neck width × 2 + 2 cm.

$= 18 \times 2 + 2 = 38$ cm

∴ total weight = Rib height × 2 + AL $= 1.5 \times 2 + 2$

$= 5$ cm

Neck rib consumption $= \frac{38 \times 5 \times 220 \times 12}{10^7} + 14\%$

$= 0.05 + (7 \times 10^{-3})$

$= 0.057$ kg/dozen

∴ Total consumption $= (2.26 + 0.057)$

$= 2.317$ kg/dz

(Answer).

Math – 2

Given, L = 76 cm

SL = 24.8 cm

½ chest = 58 cm

AL = 2 cm

Neck width = 25 cm

Rib height = 1.5 cm

Wastage, W = 10%.

GSM = 140

∴ Body fabric consumption, $= \frac{SL+L+AL}{100} \times \frac{\frac{1}{2}\text{chest}+AL}{100} \times \frac{GSM}{1000} \times 2 + W\%$

$= \frac{76+24.8+10}{100} * \frac{58+9}{100} * \frac{140}{1000} \times 2 + 10\%$

$= 0.19 + 0.019$

$= 0.21$ kg

$= 210$ (or 214 gm) gm

~~Neck Rib Consumption~~:

width = Neck width × 2 + 2 cm

$= 25 \times 2 + 2$

$= 52$ cm

Total height = Rib height × 2 + AL

$= 1.5 \times 2 + 2$

$= 5$ cm

Neck Rib Consumption $= \frac{\text{length} \times \text{width} \times GSM}{10^7} * + W\%$

$= \frac{52 \times 5 \times 140}{10^7} + 10\%$

$= 4 \times 10^{-3}$ kg

$= 4$ gram

∴ Total consumption $= (210 + 4)$ gm

$= 214$ gm

∴ difference of Actual weight and calculated weight

= (Calculated wt. − Actual wt.)

= (214 − 178)

= 36 gm

(Answer)