Full Costing and Variable Costing 4

$p_A := 149$

$dmc_A := 60$

$dlc_A := 10$

$spc_A := 2$

$xp_A := 2000$

$xs_A := 1900$

$p_B := 99$

$dmc_B := 32$

$dlc_B := 8$

$spc_B := 2$

$xp_B := 4000$

$xs_B := 4000$

$IMCfix := 3000$

$POHfix := 70000$

$AC := 80000$

$SC := 100000$

$DMC := dmc_A \cdot xp_A + dmc_B \cdot xp_B$

$DMC = 248000$

$IMCvar := 0.03 \cdot DMC$

$IMCvar = 7440$

$DLC := dlc_A \cdot xp_A + dlc_B \cdot xp_B$

$DLC = 52000$

$POHvar := 0.89 \cdot DLC$

$POHvar = 46280$

Cost per unit and result per unit (full costing)

$imcfull_A := \frac{IMCfix + IMCvar}{DMC} \cdot dmc_A$

$imcfull_A = 2.526$

$dlc_A = 10$

$pohfull_A := \frac{POHfix + POHvar}{DLC} \cdot dlc_A$

$pohfull_A = 22.362$

$imcfull_B := \frac{IMCfix + IMCvar}{DMC} \cdot dmc_B$

$imcfull_B = 1.347$

$dlc_B = 8$

$pohfull_B := \frac{POHfix + POHvar}{DLC} \cdot dlc_B$

$pohfull_B = 17.889$

Full Costing and Variable Costing 4

$spc_A = 2$ $spc_B = 2$

$mcfull_A := dmc_A + imcfull_A + dlc_A + pohfull_A + spc_A$

$mcfull_B := dmc_B + imcfull_B + dlc_B + pohfull_B + spc_B$

$mcfull_A = 96.887$ $mcfull_B = 61.236$

$MCOGSfull_A := mcfull_A \cdot xs_A$ $MCOGSfull_B := mcfull_B \cdot xs_B$

$MCOGSfull_A = 184085.955$ $MCOGSfull_B = 244945.31$

$MCOGSfull := MCOGSfull_A + MCOGSfull_B$

$MCOGSfull = 429031.266$

$ac_A := \frac{AC}{MCOGSfull} \cdot mcfull_A$ $ac_B := \frac{AC}{MCOGSfull} \cdot mcfull_B$

$ac_A = 18.066$ $ac_B = 11.419$

$sc_A := \frac{SC}{MCOGSfull} \cdot mcfull_A$ $sc_B := \frac{SC}{MCOGSfull} \cdot mcfull_B$

$sc_A = 22.583$ $sc_B = 14.273$

$tcfull_A := mcfull_A + ac_A + sc_A$ $tcfull_B := mcfull_B + ac_B + sc_B$

$tcfull_A = 137.536$ $tcfull_B = 86.928$

$r_A := p_A - tcfull_A$ $r_B := p_B - tcfull_B$

$r_A = 11.464$ $r_B = 12.072$

Cost-of-sales results accounting (full costing)

$S_A := p_A \cdot xs_A$ $S_B := p_B \cdot xs_B$

$S_A = 283100$ $S_B = 396000$

$S := S_A + S_B$

$S = 679100$

$TCOGSfull_A := tcfull_A \cdot xs_A$ $TCOGSfull_B := tcfull_B \cdot xs_B$

$TCOGSfull_A = 261319.189$ $TCOGSfull_B = 347712.077$

$$TCOGSfull := TCOGSfull_A + TCOGSfull_B$$

$$TCOGSfull = 609031.266$$

$Rfull_A := S_A - TCOGSfull_A$ $\quad$ $Rfull_B := S_B - TCOGSfull_B$

$Rfull_A = 21780.811$ $\quad$ $Rfull_B = 48287.923$

$$Rfull := Rfull_A + Rfull_B$$

$$Rfull = 70068.734$$

Total cost results accounting (full costing)

$S_A := p_A \cdot xs_A$ $\quad$ $S_B := p_B \cdot xs_B$

$S_A = 283100$ $\quad$ $S_B = 396000$

$$S := S_A + S_B$$

$$S = 679100$$

$ICfull_A := mcfull_A \cdot (xp_A - xs_A)$ $\quad$ $ICfull_B := mcfull_B \cdot (xp_B - xs_B)$

$ICfull_A = 9688.734$ $\quad$ $ICfull_B = 0$

$$ICfull := ICfull_A + ICfull_B$$

$$ICfull = 9688.734$$

$TPfull_A := S_A + ICfull_A$ $\quad$ $TPfull_B := S_B + ICfull_B$

$TPfull_A = 292788.734$ $\quad$ $TPfull_B = 396000$

$$TPfull := TPfull_A + TPfull_B$$

$$TPfull = 688788.734$$

$TCOPfull_A := TCOGSfull_A + ICfull_A$ $\quad$ $TCOPfull_B := TCOGSfull_B + ICfull_B$

$TCOPfull_A = 271007.923$ $\quad$ $TCOPfull_B = 347712.077$

$$TCOPfull := TCOPfull_A + TCOPfull_B$$

$$TCOPfull = 618720$$

$Rfull_A := TPfull_A - TCOPfull_A$ $\quad$ $Rfull_B := TPfull_B - TCOPfull_B$

$Rfull_A = 21780.811$ $\quad$ $Rfull_B = 48287.923$

Full Costing and Variable Costing 4

$$Rfull := Rfull_A + Rfull_B$$

$$Rfull = 70068.734$$

Cost per unit and result per unit (variable costing)

$dmc_A = 60$ $dmc_B = 32$

$imcvar_A := \frac{IMCvar}{DMC} \cdot dmc_A$ $imcvar_B := \frac{IMCvar}{DMC} \cdot dmc_B$

$imcvar_A = 1.8$ $imcvar_B = 0.96$

$dlc_A = 10$ $dlc_B = 8$

$pohvar_A := \frac{POHvar}{DLC} \cdot dlc_A$ $pohvar_B := \frac{POHvar}{DLC} \cdot dlc_B$

$pohvar_A = 8.9$ $pohvar_B = 7.12$

$spc_A = 2$ $spc_B = 2$

$mcvar_A := dmc_A + imcvar_A + dlc_A + pohvar_A + spc_A$

$mcvar_B := dmc_B + imcvar_B + dlc_B + pohvar_B + spc_B$

$mcvar_A = 82.7$ $mcvar_B = 50.08$

$tcvar_A := mcvar_A$ $tcvar_B := mcvar_B$

$cm_A := p_A - tcvar_A$ $cm_B := p_B - tcvar_B$

$cm_A = 66.3$ $cm_B = 48.92$

Cost-of-sales results accounting (variable costing)

$CM_A := cm_A \cdot xs_A$ $CM_B := cm_B \cdot xs_B$

$CM_A = 125970$ $CM_B = 195680$

$$CM := CM_A + CM_B$$

$$CM = 321650$$

$$Cfix := IMCfix + POHfix + AC + SC$$

$$Cfix = 253000$$

$$Rvar := CM - Cfix$$

$Rvar = 68650$

Total cost results accounting (variable costing)

$S_A := p_A \cdot xs_A$ $S_B := p_B \cdot xs_B$

$S_A = 283100$ $S_B = 396000$

$S := S_A + S_B$

$S = 679100$

$ICvar_A := mcvar_A \cdot (xp_A - xs_A)$ $ICvar_B := mcvar_B \cdot (xp_B - xs_B)$

$ICvar_A = 8270$ $ICvar_B = 0$

$ICvar := ICvar_A + ICvar_B$

$ICvar = 8270$

$TPvar_A := S_A + ICvar_A$ $TPvar_B := S_B + ICvar_B$

$TPvar_A = 291370$ $TPvar_B = 396000$

$TPvar := TPvar_A + TPvar_B$

$TPvar = 687370$

$TCOGSvar_A := tcvar_A \cdot xs_A$ $TCOGSvar_B := tcvar_B \cdot xs_B$

$TCOGSvar_A = 157130$ $TCOGSvar_B = 200320$

$TCOGSvar := TCOGSvar_A + TCOGSvar_B$

$TCOGSvar = 357450$

$TCOPvar_A := TCOGSvar_A + ICvar_A$ $TCOPvar_B := TCOGSvar_B + ICvar_B$

$TCOPvar_A = 165400$ $TCOPvar_B = 200320$

$TCOPvar := TCOPvar_A + TCOPvar_B$

$TCOPvar = 365720$

$Rvar := TPvar - TCOPvar - Cfix$

$Rvar = 68650$

Full Costing and Variable Costing 4

Legend

Subscripts A, B for products

p	= Selling price
dmc	= Direct cost of materials per unit
dlc	= Direct cost of labour per unit
spc	= Special direct production cost per unit
xp	= Quantity of goods produced
xs	= Quantity of goods sold
IMCfix	= Fixed indirect cost of materials
POHfix	= Fixed production overhead
AC	= Administration cost (fixed)
SC	= Sales cost (fixed)
DMC	= Direct cost of materials
IMCvar	= Variable indirect cost of materials
pohvarpm	= Variable production overhead per min
imcfull	= Fixed + variable indirect cost of materials per unit
pohfull	= Fixed + variable production overhead per unit
mcfull	= Fixed + variable manufacturing cost per unit
MCOGSfull	= Fixed + variable manufacturing cost of goods sold
ac	= Administration cost per unit
sc	= Sales cost per unit
tcfull	= Total fixed + variable cost per unit
r	= Result per unit
S	= Sales (value), turnover
TCOGSfull	= Total cost of goods sold in full costing
Rfull	= Result in full costing
ICfull	= Inventory change in full costing
TPfull	= Total performance in full costing
TCOPfull	= Total cost of goods produced in full costing
imcvar	= Indirect cost of materials per unit
pohvar	= Variable production overhead per unit
mcvar	= Variable manufacturing cost per unit
tcvar	= Total variable cost per unit
cm	= Contribution margin per unit
CM	= Contribution margin
Cfix	= Fixed cost
Rvar	= Result in variable costing
ICvar	= Inventory change in variable costing
TPvar	= Total performance in variable costing
TCOGSvar	= Total cost of goods sold in variable costing
TCOPvar	= Total cost of goods produced in variable costing