

# Assembly activity:

Cost per Direct Labour Hours =

$$\frac{\text{Assembly cost pool}}{\text{Direct Labour Hours}^*} =$$

$$\frac{100\,000}{80\,000} = 1.25 \text{ per direct labour hour}$$

\*\*

|                                |   |               |
|--------------------------------|---|---------------|
| 50 000 X units * 1 labour hour | = | 50 000        |
| 20 000 y units * 1 labour hour | = | 20 000        |
| 5 000 z units * 2 labour hours | = | <u>10 000</u> |
| Total direct labour hours      | = | 80 000        |

# Machining activity:

Cost per machine hour =

$$= \frac{\text{machine operating cost pool}^*}{\text{machine hours}^{**}} =$$

$$= \frac{280000}{50000} = 5,60 \text{ per machine hour}$$

\*

|                                   |   |        |
|-----------------------------------|---|--------|
| Machine setters wages and related | = | 30 000 |
|-----------------------------------|---|--------|

|                                      |   |        |
|--------------------------------------|---|--------|
| Machine department wages and related | = | 50 000 |
|--------------------------------------|---|--------|

|   |   |                |
|---|---|----------------|
| Machine power, maintenance and depreciation | = | <u>200 000</u> |
|---|---|----------------|

|                           |   |         |
|---------------------------|---|---------|
| Total machining cost pool | = | 280 000 |
|---------------------------|---|---------|

\*\*

|                                  |   |       |
|----------------------------------|---|-------|
| 50000 x units * 0.5 machine hour | = | 25000 |
|----------------------------------|---|-------|

|                                |   |       |
|--------------------------------|---|-------|
| 20000 y units * 1 machine hour | = | 20000 |
|--------------------------------|---|-------|

|                               |   |             |
|-------------------------------|---|-------------|
| 5000 z units * 1 machine hour | = | <u>5000</u> |
|-------------------------------|---|-------------|

|                     |   |       |
|---------------------|---|-------|
| Total machine hours | = | 50000 |
|---------------------|---|-------|

# Set up activity:

Cost per set-up =

$$\frac{\text{machine setting cost pool}^*}{\text{number of set-ups}^{**}} =$$

$$\frac{30000}{500} = 60 \text{ per set up}$$

\*

Machine setters wages and related = 30000

\*\*

|  |   |     |
|--|---|-----|
| 2 manufactured parts of x unit* 10 production orders per year  | = | 20  |
| 2 manufactured parts of y unit* 10 production orders per year  | = | 20  |
| 10 manufactured parts of z unit* 46 production orders per year | = | 460 |
| Total set-ups  | = | 500 |

# Material receiving and handling activity:

Cost per receipt =

Receiving and handling cost pool =  
Number of receipts\*

100000 = 158,23 per receipt  
632

\*

4 bought in components of x unit\* 10 production orders per year = 40

4 bought in components of y unit\* 10 production orders per year = 40

12 bought in components of z unit\* 46 production orders per year = 552

Total receipts = 632

# Despatch activity:

Cost per despatch =

$$\frac{\text{despatch cost pool}}{\text{no of despatches}^*}$$

$$\frac{50000}{76} = \underline{657,89} \text{ per despatch}$$

\*

|                   |      |
|-------------------|------|
| Unit x despatches | = 10 |
| Unit y despatches | = 20 |
| Unit z despatches | = 46 |
| Total despatches  | = 76 |

# Production planning activity:

Cost per production order =

$$\frac{\text{production planning cost pool}}{\text{number of production orders}^*} =$$

$$\frac{50000}{66} = 757,58 \text{ per production order}$$

\*

10 production orders of unit x per year = 10

10 production orders of unit y per year = 10

46 production orders per year of unit z per year = 46

Total production order = 66

# Value added activity:

% of value added =

administration and general cost pool =  
other overhead costs and direct labour\*

$$\frac{100000}{980000} = 10.2\%$$

\*

|   |          |
|---|----------|
| Other oh (100+50+30+200+100+50+50)          | = 580000 |
| Direct labour (80000 DLH * DL wage rate £5) | = 400000 |
| Total                                       | = 980000 |

# Product x

Set-up (cost driver: set-ups)

$(£60 \text{ per set-up} * 20 \text{ set-ups per year}) / 50.000 \text{ units per year} =$   
 $= £0.02 \text{ per unit}$

Material handling (cost driver: receipts)

$(£158.23 \text{ per receipt} * 40 \text{ receipts per year}) / 50.000 \text{ units per year}$   
 $= 0.13 \text{ per unit}$

Despatch:  $(657.89 * 10) / 50000 = 0.13 \text{ per unit}$

Production planning:  $(757.58 * 10) / 50000 = 0.15 \text{ per unit}$

Value added:  $(5 + 1.25 + 2.50 + 0.02 + 0.13 + 0.13 + 0.15) * 10.2\% = 0.94$   
per unit