

# Quantitative Methods

# Costings

Module No. Cons 1012

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# Costings 4 Worksheet

- To find the total costings always read the question carefully and calculate the answer in order of the question.

- Q. 1 Calculate the cost of slating the lean-to roof shown if the cost of slating is €30.68 per m<sup>2</sup>

- Allow 15% for waste.

- **Answer:**

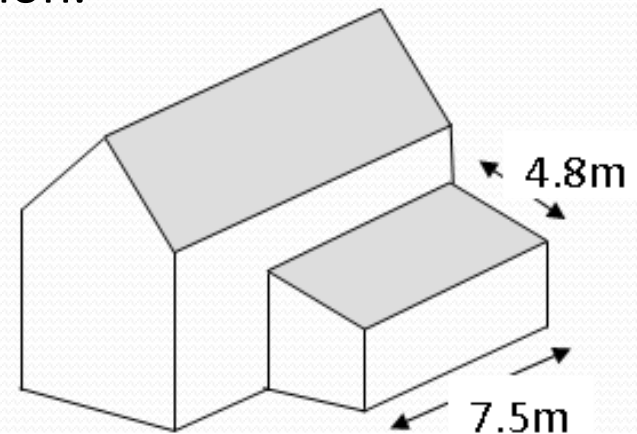
- $7.5 \times 4.8 \times €30.68 = € 1104.48$

- $1104.48 + 15\% = \mathbf{€1270.15}$

- Or

- $7.5 \times 4.8 = 36 + 15\% = 41.4$

- $41.4 \times 30.68 = \mathbf{€1270.15}$



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- Q. 2 A damaged door is to be replaced including new hinges and lock. If the door costs € 35.80, the hinges and lock € 5.25 and the job takes a joiner 3 hours @ € 17.30 per hour, calculate the cost of the work allowing 25% for overheads and profit.

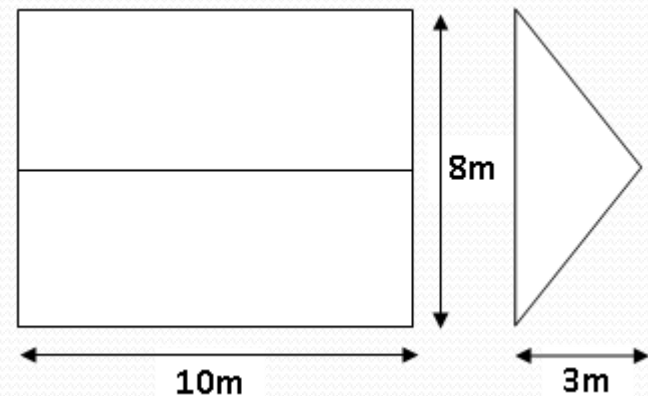
- **Answer:**

- **Q. 2** Total Cost:            Door                    € 35.80
- Hinges                    € 5.25
- Labour (3 x €17.30) =    € 51.90
- € 92.95 + 25%    =    **€ 116.18**

# Costings 4 Worksheet

- Q. 3 The given drawing shows the plan and elevation of a simple roof. Using the rates below, which include the cost of materials and labour only, estimate the cost of felting, battening and tiling the roof. Add 25% for profit and a further 5% for overheads.

- Roofing felt = € 7.10 per m<sup>2</sup>
- Tiling Slopes = € 16.88 per m<sup>2</sup>  
(including Battens)
- Ridge tiling = € 4.16 per m run



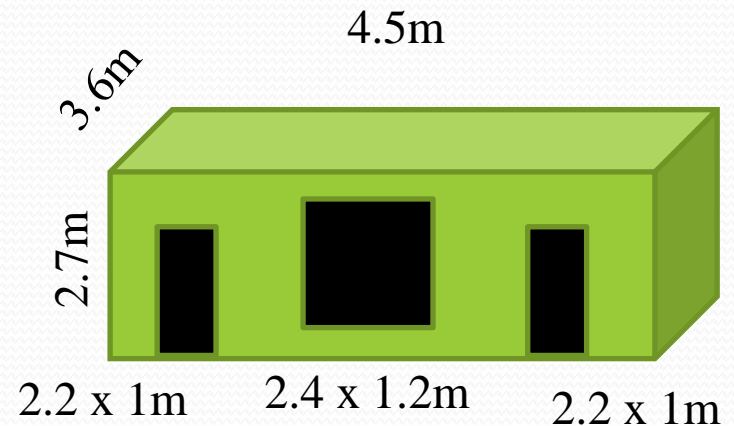


# Costings 4 Worksheet

- Q. 4 A room is 4.5m by 3.6m and 2.7m high. It has two doors (each 2200 x 1000mm including architrave) and one window (2400 x 1200mm). Estimate the cost of decoration as follows:
- Ceiling to be painted with 2 coats emulsion @ € 5.40 per m<sup>2</sup>
- Walls to be pre-paired and painted 2 coats @ € 6.00 per m<sup>2</sup>
- Doors (room side only) painted 1 coat @ € 7.50 per m<sup>2</sup>
- Allow 25% for overheads and profit.
- ***(Prices shown are per m<sup>2</sup> per coat)***

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- Allow 25% for overheads and profit.
- *(Prices shown are per m<sup>2</sup> per coat)*
- *I would sketch out a 3D model and put in the sizes*



# Costings 4 Worksheet

- **Q. 4**
- Ceiling =  $4.5 \times 3.6 = 16.2\text{m} \times 2(\text{coats}) \times \text{€ } 5.40 = \text{€}174.96$
- Walls (4)  $2 \times 4.5 \times 2.7 = 24.3$
- $2 \times 3.6 \times 2.7 = \underline{19.44} = 43.74\text{m}^2$
- Less Doors  $2 \times 2.2 \times 1.0 = 4.4$
- Window  $2.4 \times 1.2 = \underline{2.88} = \underline{7.28\text{m}^2}$
- $= 36.46\text{m}^2 \times 2 \times \text{€}6 = \text{€}437.52$
- Doors =  $2.2 \times 1.0 \times 2 = 4.4 \text{ m}^2 \times \text{€}7.50 = \text{€}33.00 = \underline{\text{€ } 33.00}$
- **€ 645.48**
- $\text{€}174.96 (\text{ceiling}) + \text{€}437 (\text{walls}) + \text{€}33 (\text{doors}) = \text{€}645.48$
- Total Cost  $\text{€ } 645.48 + 25\% (\text{overheads}) = \text{€}806.85$
- **Answer: €806.85**

# Costings 4 Worksheet

- Q. 5 Calculate the cost of the timber at €187.10 per m<sup>3</sup> for a job requiring the following:
- Twenty four 3.6m lengths of 50mm x 180mm
- 14.4m run of 50mm x 75mm
- 3.6m run of 75mm x 200mm
- Allow 23% for VAT on your answer.
- **Q. 5**
- 24 of  $3.6 \times 0.05 \times 0.18 = 0.7776 \text{ m}^3$
- $14.4 \times 0.05 \times 0.075 = 0.0540 \text{ m}^3$
- $3.6 \times 0.075 \times 0.2 = \underline{0.0540 \text{ m}^3}$
- $0.8856 \text{ m}^3 \times €187.10 = 165.70$
- (Plus VAT)  $165.70 + 23\% \text{ (VAT)} = \mathbf{€ 203.81}$
- **Answer: €203.81**