

**LICENCIATURA EN ARQUITECTURA**

**“Taller de construcción de materiales”**

## **EXAMEN**

Presenta:

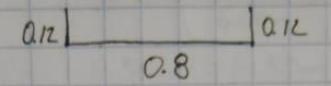
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# Varillas

Varilla #3

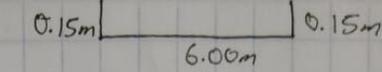


- Transversales.
- Longitud.  $0.8m + 0.24m = 1.04m$
- Piezas.  $6.65m \times 0.15 + 1 = 45.33 = 46 \text{ PZA.}$
- $46 \text{ PZA} \times 1.04m = 47.84m$
- Longitudinales.
- Longitud =  $6.65m + 0.24m = 6.89m$
- PZA =  $4(6.89m) = 27.56m$
- Contratrabe.
- Longitud =  $6.00m + 0.24m = 6.24m$
- Piezas =  $2(6.24m) = 12.48m$
- SUMATORIA.

47.84m	→	87.88m	× 1.03	=	90.51m	=	7.54	=	8 PZA
+ 27.56m									
12.48m									
<u>87.88m</u>									

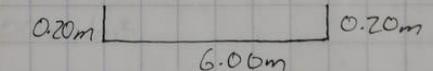
Total en Kilogramos  
 $(90.51m)(0.566 \text{ kg/m}) = 51.22 \text{ Kg}$

Varilla #4



- Longitud =  $6.00m + 0.30m = 6.30m$
- PZA =  $(2)(6.30m) = 12.6m$
- desperdicio =  $12.6m(1.05) = 13.23m$
- Total de Piezas =  $\frac{13.23m}{12} = 1.102 = 1 \text{ PZA}$
- Total en Kg =  $13.23m(0.997 \text{ kg/m}) = 13.19 \text{ Kg}$

Varilla #5



- Longitud =  $6.00m + 0.40m = 6.40m$
- PZA =  $(2) 6.40m = 12.8m$
- Desperdicio =  $12.8m(1.07) = 13.696m$
- Total de Piezas =  $\frac{13.696m}{12} = 1.14 = 1 \text{ PZA}$
- Total de Kg =  $13.696m \times 1.566 \text{ kg/m} = 21.44 \text{ kg}$

Varilla #2

- Longitud =  $1.30m + 0.14 = 1.44m$
- PZA =  $6.00m / 0.15m + 1 = 41 \text{ PZA}$  (desperdicio B!)
- Long total =  $41 \text{ PZA}(1.44m) = 59.04m(1.03) = 60.8112m$
- Peso total en Kg =  $60.8112m(0.250 \text{ kg/m}) = 15.20 \text{ Kg}$

# Excavación y concreto

Excavación

$$6.85\text{m} \times 1\text{m} \times 1.15\text{m} = 7.8775\text{m}^3$$

$$\text{Mas desperdicio del 30\%} = 7.8775\text{m} (1.30) = 10.240\text{m}^3$$

Concreto Fc 100kg/m<sup>2</sup>

$$1\text{m} \times 0.85\text{m} \times 0.05\text{m} = 0.3425\text{m}^3$$

$$\text{mas desperdicio del 10\%} = 0.3425\text{m}^3 (1.1) = 0.376\text{m}^3$$

Concreto Fc 200kg/m<sup>2</sup>

$$0.80\text{m} \times 6.65\text{m} \times 0.15\text{m} = 0.798\text{m}^3$$

$$0.15\text{m} \times 0.35\text{m} \times 6.00\text{m} = 0.315\text{m}^3$$

$$0.798\text{m}^3 + 0.315\text{m}^3 = 1.113\text{m}^3 (1.05) = 1.168\text{m}^3$$