



# Mi Universidad

## cálculos de volúmenes de obra

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*Nombre del tema cálculo de volúmenes de obra*

*Parcial 2*

*Nombre de la Materia taller de construcción de materiales básicos*

*Nombre del profesor ARQ Pedro Alberto*

*Nombre de la Licenciatura Arquitectura*

*Cuatrimestre 5°*



Perano = 1.26m

$4.6 \times 4.6$

$5.2 - 1.0 = 4.2$

Concepto	Eje	tramo	unidad	Base	largo	Alto	reas.	Total OBS.
Excavación	1	A-B	M <sup>3</sup>	1.0	8.0	1.18	+1	9.44m <sup>3</sup>
	A	1-2	M <sup>3</sup>	1.0	4.2	1.18	+1	4.95m <sup>3</sup>
								14.39m <sup>3</sup>
								+30% Abond.
								18.70m <sup>3</sup>
Concreto	1	A-B	M <sup>3</sup>	1.0	8.0	0.05	+1	0.40m <sup>3</sup>
	A	1-2	M <sup>3</sup>	1.0	4.2	0.05	+1	0.21m <sup>3</sup>
								0.61m <sup>3</sup>
								+5%
								0.64m <sup>3</sup>
								7.20 x .15 = 48 + 1 = 49
								4.2 / 0.15 + 1 = 29
Acero N.2	1	A-B	kg	1.26	/		49	61.74 CT
	A	1-2	kg	1.26	/		29	36.54 CT
								98.28
								+10%
								108.1m
								x 0.25 kg/m
								= 27.02 kg
Acero N3	1	A-B	reas	0.90	/		49	44.1m A#7
	A	1-2	reas	0.90	/		29	26.1m Av7
	1	A-B	reas	8.10	/		4	32.4m AL7
	A	1-2	reas	5.10	/		4	20.4m AL7
							5m - 0.8 = 4.20 / 0.15 + 1 = 29	
							101	
							7.90	
							110	
							8.10	
							101	
							10 = 5.10	
							sch 90	



Suma de todo el acero #3

Concreto	eje	Tramo	Unidades	longitud	ata	pzas	total	Obs.
	I	A-B	pzas	/	7.30	/	2	4.60m CT
	A	1-2	pzas	/	4.30	/	2	8.60m CT
					$7.10$			
					$1.10 = 7.30$			
					$.10$			
					$4.10$			
					$.10 = 4.30$			
	I	A-B	pzas	/	0.95	/	8	7.6m Block
	A	1-2	pzas	/	0.95	/	5	4.75m
					$7.20\% + 1 = 8$			
					$4.20\% + 1 = 5.2$			
								158.55m
								+10%
								174.40m
								12m
								14.53 = 15 pzas

recubrimiento

$7.20 - 10 = 7.10$        $4.10$

$\swarrow$   $-.15$   $7.10$   $1.15 = 7.40$   $-.15$   $4.10$   $.15 = 4.40$

Acero #4								
	I	A-B	pzas	/	7.40	/	2	14.8m CT
	A	1-2	pzas	/	4.40	/	2	8.8m CT
								23.6m
								+5%
								= 24.78m
								12m
								= 2.06 = 2 pzas.

$7.20$   $-.15$   $7.50$   $4.20$   $-.15$   $4.50$

Acero No 5								
	I	A-B	pzas	/	7.50	/	2	15m CT
	A	1-2	pzas	/	4.50	/	2	9m CT
								24m
								+7%
								= 25.68m
								12m
								= 2.14 = 2 pzas

$7.50 + 4.50 = 12$

$30$

$30$

Aimex 15x20-4								
	I	A-B	pzas	/	7.50	/	1	7.50 D-1
	A	1-2	pzas	/	4.50	/	1	4.50 B-1
								12.0 = 2 pzas

claro de un aimex

Scribe

$1.8 \times 8 \times 15 = 9.96$

Material	Quantity	Dimensions	Unit	Length	Width	Height	Area	Volume	Notes
Concreto $F_c = 200 \text{ kg/cm}^3$	1	A-B	$M^3$	0.80	8.0	0.15	1	0.96	Base
	A	1-2	$M^3$	0.80	4.20	0.15	1	0.50	Base
	1	A-B	$M^3$	0.15	7.20	0.35	1	0.38	CT
	A	1-2	$M^3$	$0.15 \times 4.05 \times 0.35$		1	0.21	CT	
	1	A-B	$M^3$	0.15	7.2	0.20	1	0.22	0-1
	A	1-2	$M^3$	0.15	4.05	0.20	1	0.12	0-1
							2.39 $m^3$		
							+ 10%		
							<u>2.62 <math>m^3</math></u>		