Apuntes : Calcular Margen bruto y Margen bruto como % del total de ventas

Por ejemplo, puede definir algunas columnas calculadas en la tabla *Sales* para calcular el monto del margen bruto:

```
Sales[SalesAmount] = Sales[Quantity] * Sales[Net Price]
Sales[TotalCost] = Sales[Quantity] * Sales[Unit Cost]
Sales[GrossMargin] = Sales[SalesAmount] - Sales[TotalCost]
```

¿Qué sucede si desea mostrar el margen bruto como un porcentaje del monto de las ventas? Puede crear una columna calculada con la siguiente fórmula:

```
Sales[GrossMarginPct] = Sales[GrossMargin] / Sales[SalesAmount]
```

Quantity	Unit Price	Unit Discount	Unit Cost	Net Price	Sales Amount	Total Cost	GrossMargin	GrossMarginPct
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54
1	$8,99	$0,00	$4,13	$8,99	$8,99	$4,13	$4,86	0,54

Para utilizar la columna *GrossMarginPct* en una visualización de tabla debemos utilizar una columna con valores únicos, dado que es un cálculo con contexto de fila

`1 SalesKey = Sales[Order Number] & "-" & RIGHT ( "0000" & Sales[Order Line Number], 4 )`

rder Number	Order Line Number	Quantity	Unit Price	Unit Discount	Unit Cost	Net Price	SalesAmount	TotalCost	GrossMargin	GrossMarginPct	SalesKey
0701022CS425	13	1	$279,00	$41,85	$142,24	$237,15	$237,15	$142,24	$94,91	40,02 %	200701022CS425-0013
0701022CS425	14	1	$279,00	$41,85	$142,24	$237,15	$237,15	$142,24	$94,91	40,02 %	200701022CS425-0014
0701022CS425	15	1	$279,00	$41,85	$142,24	$237,15	$237,15	$142,24	$94,91	40,02 %	200701022CS425-0015
0701022CS425	16	4	$279,00	$41,85	$142,24	$237,15	$948,60	$568,96	$379,64	40,02 %	200701022CS425-0016
0701022CS425	17	1	$279,00	$41,85	$142,24	$237,15	$237,15	$142,24	$94,91	40,02 %	200701022CS425-0017
0701022CS425	18	1	$279,00	$41,85	$142,24	$237,15	$237,15	$142,24	$94,91	40,02 %	200701022CS425-0018
0701023CS425	202	2	$13,50	$2,03	$6,88	$11,48	$22,95	$13,76	$9,19	40,04 %	200701023CS425-0202
0701023CS425	203	1	$13,50	$2,03	$6,88	$11,48	$11,48	$6,88	$4,60	40,04 %	200701023CS425-0203
0701023CS425	204	1	$13,50	$2,03	$6,88	$11,48	$11,48	$6,88	$4,60	40,04 %	200701023CS425-0204
0701023CS425	205	1	$13,50	$2,03	$6,88	$11,48	$11,48	$6,88	$4,60	40,04 %	200701023CS425-0205
0701023CS425	206	1	$13,50	$2,03	$6,88	$11,48	$11,48	$6,88	$4,60	40,04 %	200701023CS425-0206
0701023CS425	207	4	$13,50	$2,03	$6,88	$11,48	$45,90	$27,52	$18,38	40,04 %	200701023CS425-0207
0701023CS425	208	1	$11,90	$1,79	$6,07	$10,12	$10,12	$6,07	$4,05	39,99 %	200701023CS425-0208
0701023CS425	209	1	$11,90	$1,79	$6,07	$10,12	$10,12	$6,07	$4,05	39,99 %	200701023CS425-0209
0701023CS425	210	1	$11,90	$1,79	$6,07	$10,12	$10,12	$6,07	$4,05	39,99 %	200701023CS425-0210
0701023CS425	211	1	$11,90	$1,79	$6,07	$10,12	$10,12	$6,07	$4,05	39,99 %	200701023CS425-0211
0701023CS425	212	4	$11,90	$1,79	$6,07	$10,12	$40,46	$24,28	$16,18	39,99 %	200701023CS425-0212
0701023CS425	213	1	$11,90	$1,79	$6,07	$10,12	$10,12	$6,07	$4,05	39,99 %	200701023CS425-0213
0701023CS425	214	2	$99,00	$14,85	$50,47	$84,15	$168,30	$100,94	$67,36	40,02 %	200701023CS425-0214
0701023CS425	215	1	$99,00	$14,85	$50,47	$84,15	$84,15	$50,47	$33,68	40,02 %	200701023CS425-0215
0701023CS425	216	1	$99,00	$14,85	$50,47	$84,15	$84,15	$50,47	$33,68	40,02 %	200701023CS425-0216
0701023CS425	217	1	$99,00	$14,85	$50,47	$84,15	$84,15	$50,47	$33,68	40,02 %	200701023CS425-0217
0701023CS425	218	1	$99,00	$14,85	$50,47	$84,15	$84,15	$50,47	$33,68	40,02 %	200701023CS425-0218
0701023CS425	219	4	$99,00	$14,85	$50,47	$84,15	$336,60	$201,88	$134,72	40,02 %	200701023CS425-0219
0701023CS425	220	1	$369,00	$55,35	$188,13	$313,65	$313,65	$188,13	$125,52	40,02 %	200701023CS425-0220

SalesKey	SalesAmount	TotalCost	GrossMargin	GrossMarginPct
200701022CS425-0013	$237,15	$142,24	$94,91	40,02 %
200701022CS425-0014	$237,15	$142,24	$94,91	40,02 %
200701022CS425-0015	$237,15	$142,24	$94,91	40,02 %
200701022CS425-0016	$948,60	$568,96	$379,64	40,02 %
200701022CS425-0017	$237,15	$142,24	$94,91	40,02 %
200701022CS425-0018	$237,15	$142,24	$94,91	40,02 %
200701023CS425-0202	$22,95	$13,76	$9,19	40,04 %
200701023CS425-0203	$11,48	$6,88	$4,60	40,04 %
200701023CS425-0204	$11,48	$6,88	$4,60	40,04 %
200701023CS425-0205	$11,48	$6,88	$4,60	40,04 %
200701023CS425-0206	$11,48	$6,88	$4,60	40,04 %
200701023CS425-0207	$45,90	$27,52	$18,38	40,04 %
200701023CS425-0208	$10,12	$6,07	$4,05	39,99 %
200701023CS425-0209	$10,12	$6,07	$4,05	39,99 %
200701023CS425-0210	$10,12	$6,07	$4,05	39,99 %
200701023CS425-0211	$10,12	$6,07	$4,05	39,99 %
200701023CS425-0212	$40,46	$24,28	$16,18	39,99 %
Total	**$30.591.343,98**	**$14.348.705,23**	**$16.242.638,75**	**4800517,08 %**

Si utilizásemos el campo de subcategorías obtendríamos valores incoherentes en la columna de **GrossMarginPct**

Subcategory	SalesAmount	TotalCost	GrossMargin	GrossMarginPct
Air Conditioners	$712.451,93	$347.768,95	$364.682,98	80375,01 %
Bluetooth Headphones	$124.450,79	$59.363,32	$65.087,47	75202,24 %
Boxed Games	$63.808,14	$30.259,16	$33.548,98	285866,33 %
Camcorders	$3.157.075,19	$1.386.533,90	$1.770.541,29	172726,49 %
Cameras & Camcorders Accessories	$800.534,42	$305.987,99	$494.546,43	156078,16 %
Car Video	$604.413,71	$311.956,79	$292.456,92	61829,24 %
Cell phones Accessories	$274.049,03	$148.345,48	$125.703,55	756364,00 %
Coffee Machines	$974.725,18	$458.893,55	$515.831,63	97873,28 %
Computers Accessories	$341.362,15	$178.403,31	$162.958,84	303581,22 %
Desktops	$1.017.127,27	$546.197,21	$470.930,06	100673,81 %
Digital Cameras	$784.935,68	$361.233,77	$423.701,91	160510,32 %
Digital SLR Cameras	$2.450.036,66	$976.721,12	$1.473.315,54	226134,82 %
Download Games	$296.844,67	$156.110,39	$140.734,28	219716,84 %
Fans	$133.137,15	$71.887,06	$61.250,09	95344,76 %
Home & Office Phones	$92.927,08	$45.427,74	$47.499,34	127070,42 %
Home Theater System	$1.525.526,26	$773.980,42	$751.545,84	125054,11 %
Lamps	$1.112.452,14	$540.486,41	$571.965,73	221991,54 %
Laptops	$1.925.105,28	$897.595,92	$1.027.509,36	112848,83 %
Microwaves	$763.859,16	$366.218,40	$397.640,76	151636,68 %
Total	**$30.591.343,98**	**$14.348.705,23**	**$16.242.638,75**	**4800517,08 %**

Cuando calculamos el valor agregado de un porcentaje, no podemos confiar en columnas calculadas. En su lugar, necesitamos calcular el porcentaje en función de la suma de columnas individuales

La implementación correcta para *GrossMarginPct* es con una medida:

```
GrossMarginPct := SUM ( Sales[GrossMargin] ) / SUM (Sales[SalesAmount] )
```

```
1  GrossMarginPct = SUM(Sales[GrossMargin])/SUM(Sales[SalesAmount])
```

Subcategory	SalesAmount	TotalCost	GrossMargin	GrossMarginPct	GrossMarginPct
Air Conditioners	$712.451,93	$347.768,95	$364.682,98	80375,01 %	51,19 %
Bluetooth Headphones	$124.450,79	$59.363,32	$65.087,47	75202,24 %	52,30 %
Boxed Games	$63.808,14	$30.259,16	$33.548,98	285866,33 %	52,58 %
Camcorders	$3.157.075,19	$1.386.533,90	$1.770.541,29	172726,49 %	56,08 %
Cameras & Camcorders Accessories	$800.534,42	$305.987,99	$494.546,43	156078,16 %	61,78 %
Car Video	$604.413,71	$311.956,79	$292.456,92	61829,24 %	48,39 %
Cell phones Accessories	$274.049,03	$148.345,48	$125.703,55	756364,00 %	45,87 %
Coffee Machines	$974.725,18	$458.893,55	$515.831,63	97873,28 %	52,92 %
Computers Accessories	$341.362,15	$178.403,31	$162.958,84	303581,22 %	47,74 %
Desktops	$1.017.127,27	$546.197,21	$470.930,06	100673,81 %	46,30 %
Digital Cameras	$784.935,68	$361.233,77	$423.701,91	160510,32 %	53,98 %
Digital SLR Cameras	$2.450.036,66	$976.721,12	$1.473.315,54	226134,82 %	60,13 %
Download Games	$296.844,67	$156.110,39	$140.734,28	219716,84 %	47,41 %
Fans	$133.137,15	$71.887,06	$61.250,09	95344,76 %	46,01 %
Home & Office Phones	$92.927,08	$45.427,74	$47.499,34	127070,42 %	51,11 %
Home Theater System	$1.525.526,26	$773.980,42	$751.545,84	125054,11 %	49,26 %
Lamps	$1.112.452,14	$540.486,41	$571.965,73	221991,54 %	51,41 %
Laptops	$1.925.105,28	$897.595,92	$1.027.509,36	112848,83 %	53,37 %
Microwaves	$763.859,16	$366.218,40	$397.640,76	151636,68 %	52,06 %
Total	**$30.591.343,98**	**$14.348.705,23**	**$16.242.638,75**	**4800517,08 %**	**53,10 %**