

**Credit** 1000000  
**i p. a.** 0.12  
**i p. m.** 0.01  
**No of years:** 10

Create a plan of redemption that relates to a loan o

<b>Annuity:</b>	<b>14347.09484</b>	<b>Payment Annuity</b>	<b>Payment of Interest</b>
		0	
		1 14347.1	10000
		2 14347.1	9956.529052
		3 14347.1	9912.623394
		4 14347.1	9868.278679
		5 14347.1	9823.490518
		6 14347.1	9778.254474
		7 14347.1	9732.566071
		8 14347.1	9686.420783
		9 14347.1	9639.814042
		10 14347.1	9592.741235
		11 14347.1	9545.197698
		12 14347.1	9497.178727
		13 14347.1	9448.679566
		14 14347.1	9399.695413
		15 14347.1	9350.221419
		16 14347.1	9300.252685
		17 14347.1	9249.784263
		18 14347.1	9198.811157
		19 14347.1	9147.328321
		20 14347.1	9095.330655
		21 14347.1	9042.813013
		22 14347.1	8989.770195
		23 14347.1	8936.196949
		24 14347.1	8882.08797
		25 14347.1	8827.437901
		26 14347.1	8772.241332
		27 14347.1	8716.492797
		28 14347.1	8660.186776
		29 14347.1	8603.317696
		30 14347.1	8545.879924
		31 14347.1	8487.867775
		32 14347.1	8429.275504
		33 14347.1	8370.097311
		34 14347.1	8310.327336
		35 14347.1	8249.959661
		36 14347.1	8188.988309
		37 14347.1	8127.407244
		38 14347.1	8065.210368
		39 14347.1	8002.391523

40	14347.1	7938.94449
41	14347.1	7874.862986
42	14347.1	7810.140668
43	14347.1	7744.771126
44	14347.1	7678.747889
45	14347.1	7612.064419
46	14347.1	7544.714115
47	14347.1	7476.690308
48	14347.1	7407.986262
49	14347.1	7338.595177
50	14347.1	7268.51018
51	14347.1	7197.724333
52	14347.1	7126.230628
53	14347.1	7054.021986
54	14347.1	6981.091258
55	14347.1	6907.431222
56	14347.1	6833.034586
57	14347.1	6757.893983
58	14347.1	6682.001975
59	14347.1	6605.351046
60	14347.1	6527.933608
<b>61</b>	<b>14347</b>	<b>6449.741996</b>
62	14347.1	6370.768467
63	14347.1	6291.005203
64	14347.1	6210.444307
65	14347.1	6129.077802
66	14347.1	6046.897631
67	14347.1	5963.895659
68	14347.1	5880.063667
69	14347.1	5795.393356
70	14347.1	5709.876341
71	14347.1	5623.504156
72	14347.1	5536.268249
73	14347.1	5448.159983
74	14347.1	5359.170635
75	14347.1	5269.291393
76	14347.1	5178.513358
77	14347.1	5086.827543
78	14347.1	4994.22487
79	14347.1	4900.696171
80	14347.1	4806.232184
81	14347.1	4710.823557
82	14347.1	4614.460844
83	14347.1	4517.134504
84	14347.1	4418.834901
85	14347.1	4319.552302
86	14347.1	4219.276876

87	14347.1	4117.998697
88	14347.1	4015.707735
89	14347.1	3912.393864
90	14347.1	3808.046854
91	14347.1	3702.656375
92	14347.1	3596.21199
93	14347.1	3488.703161
94	14347.1	3380.119245
95	14347.1	3270.449489
96	14347.1	3159.683035
97	14347.1	3047.808917
98	14347.1	2934.816058
99	14347.1	2820.69327
100	14347.1	2705.429254
101	14347.1	2589.012599
102	14347.1	2471.431776
103	14347.1	2352.675145
104	14347.1	2232.730949
105	14347.1	2111.58731
106	14347.1	1989.232234
107	14347.1	1865.653608
108	14347.1	1740.839196
109	14347.1	1614.776639
110	14347.1	1487.453457
111	14347.1	1358.857044
112	14347.1	1228.974666
113	14347.1	1097.793464
114	14347.1	965.3004502
115	14347.1	831.4825063
116	14347.1	696.3263829
117	14347.1	559.8186983
118	14347.1	421.9459369
119	14347.1	282.6944479
120	14347.1	142.050444

of 1,000,000.00. The interest rate is 12% p. a. and the bank calculates the interest each month. You re

Amortization of debt	Current Debt
	1000000
4347.09484	995652.9052
4390.565789	991262.3394
4434.471447	986827.8679
4478.816161	982349.0518
4523.604323	977825.4474
4568.840366	973256.6071
4614.52877	968642.0783
4660.674057	963981.4042
4707.280798	959274.1235
4754.353606	954519.7698
4801.897142	949717.8727
4849.916113	944867.9566
4898.415274	939969.5413
4947.399427	935022.1419
4996.873421	930025.2685
5046.842156	924978.4263
5097.310577	919881.1157
5148.283683	914732.8321
5199.76652	909533.0655
5251.764185	904281.3013
5304.281827	898977.0195
5357.324645	893619.6949
5410.897892	888208.797
5465.00687	882743.7901
5519.656939	877224.1332
5574.853509	871649.2797
5630.602044	866018.6776
5686.908064	860331.7696
5743.777145	854587.9924
5801.214916	848786.7775
5859.227065	842927.5504
5917.819336	837009.7311
5976.997529	831032.7336
6036.767505	824995.9661
6097.13518	818898.8309
6158.106531	812740.7244
6219.687597	806521.0368
6281.884473	800239.1523
6344.703317	793894.449

**Calculation - excel:**

Redemption in 5 years

**7897.352845**

**Calculation by hand:**

$AM(r) = a \cdot v^{(n-r)}$

Let  $AM(r)$  ..... is the amortiz:

Then:  $AM(r+1) =$

It holds true:  $a = IP + AM$

Then:  $IM(r+1) = a - AM(r+1)$

$D(r)$  ..... is the state

It holds true:  $U(r+1) = D(r) \cdot i$

Then:  $D(r) = U(r+1) / i$

**Payment**

60

61

**Sum of interest payment**

It holds true:  $a_1 = a_2 = \dots = a_n$

Then the following must appl

Where the sum of AM must k

Then the sum of IP =

**Calculation - excel:**

6408.150351	787486.2986
6472.231854	781014.0668
6536.954173	774477.1126
6602.323714	767874.7889
6668.346952	761206.4419
6735.030421	754471.4115
6802.380725	747669.0308
6870.404533	740798.6262
6939.108578	733859.5177
7008.499664	726851.018
7078.58466	719772.4333
7149.370507	712623.0628
7220.864212	705402.1986
7293.072854	698109.1258
7366.003583	690743.1222
7439.663618	683303.4586
7514.060255	675789.3983
7589.200857	668200.1975
7665.092866	660535.1046
7741.743794	652793.3608
7819.161232	644974.1996
<b>7897.352845</b>	<b>637076.8467</b>
7976.326373	629100.5203
8056.089637	621044.4307
8136.650533	612907.7802
8218.017039	604689.7631
8300.197209	596389.5659
8383.199181	588006.3667
8467.031173	579539.3356
8551.701485	570987.6341
8637.218499	562350.4156
8723.590684	553626.8249
8810.826591	544815.9983
8898.934857	535917.0635
8987.924206	526929.1393
9077.803448	517851.3358
9168.581482	508682.7543
9260.267297	499422.487
9352.86997	490069.6171
9446.39867	480623.2184
9540.862656	471082.3557
9636.271283	461446.0844
9732.633996	451713.4504
9829.960336	441883.4901
9928.259939	431955.2302
10027.54254	421927.6876
10127.81796	411799.8697

The amortization in 5 years

7897.352845

The sum of payed interest

512249.632

10229.09614	401570.7735
10331.3871	391239.3864
10434.70098	380804.6854
10539.04799	370265.6375
10644.43847	359621.199
10750.88285	348870.3161
10858.39168	338011.9245
10966.9756	327044.9489
11076.64535	315968.3035
11187.41181	304780.8917
11299.28592	293481.6058
11412.27878	282069.327
11526.40157	270542.9254
11641.66559	258901.2599
11758.08224	247143.1776
11875.66306	235267.5145
11994.41969	223273.0949
12114.36389	211158.731
12235.50753	198923.2234
12357.86261	186565.3608
12481.44123	174083.9196
12606.25564	161477.6639
12732.3182	148745.3457
12859.64138	135885.7044
12988.2378	122897.4666
13118.12017	109779.3464
13249.30138	96530.04502
13381.79439	83148.25063
13515.61233	69632.63829
13650.76846	55981.86983
13787.27614	42194.59369
13925.1489	28269.44479
14064.40039	14205.0444
14205.0444	0.00

repay the debt in 10 years with regular monthly payment. What will be the interest payment after 5

Payment of interest in 5 years	Current debt
<b>6449.741996</b>	<b>637076.8467</b>

ation in 5th year, ie 60th installments (12 installments per year, 5 years).  
7897.352845 ie redemption in the 61st installment.

6449.741996

re of debt in 5th year.

644974.1996

Anuita	Interest paymen	Amortizatio	Current Debt
14347.09484			644974.2
14347.09484	<b>6449.741996</b>	<b>7897.35284</b>	<b>637076.847</b>

Equation: sum of IP=a\*r-sum\_AM

Debt = D(0)-D(r)

**512249.632**

**512249.632**

355025.8004

Interest payment in 5th year	Debt
6449.741996	637076.8467

The sum of all redemptions in 5 years  
355025.8004





5 years? How much do you pay on interest in total over this period? What is the current level of debt i





n 5 years?