

# CMA Entrance Examination Supplement

## Formulae

### 1. CAPITAL STRUCTURE

- a) After-Tax Marginal Cost of Debt:

$$k_b = k(1 - T) \text{ or } \frac{(1 - T)I}{F}$$

where  $k$  = interest rate  
 $T$  = corporate tax rate  
 $I$  = annual interest payment on debt  
 $F$  = face value of debt

- b) Cost of Preferred Shares:

$$k_p = \frac{D_p}{NP_p}$$

where  $D_p$  = stated annual dividend payment on shares  
 $NP_p$  = net proceeds on preferred share issue

- c) Cost of Common Equity:

- i) Cost of Common Shares (Capitalization of Dividends with Constant Growth Rate):

$$k_e = \frac{D_1}{NP_e} + g$$

where  $D_1$  = dividend expected for period 1  
 $NP_e$  = net proceeds on common share issue  
 $g$  = annual long-term dividend growth rate

- ii) Cost of Retained Earnings:

$$k_{re} = r_e = \frac{D_1}{P_e} + g$$

where  $P_e$  = market price of a share  
 $r_e$  = expected return on common equity

iii) Capital Asset Pricing Model:

$$R_j = R_f + \beta_j(R_m - R_f)$$

where  $R_j$  = expected rate of return on security  $j$

$R_f$  = risk-free rate

$R_m$  = expected return for the market portfolio

$\beta_j$  = beta coefficient for security  $j$  (measure of systematic risk)

d) Weighted Average Cost of Capital:

$$k = \left(\frac{B}{V}\right)k_b + \left(\frac{P}{V}\right)k_p + \left(\frac{E}{V}\right)k_e$$

where  $B$  = amount of debt outstanding

$P$  = amount of preferred shares outstanding

$E$  = amount of common equity outstanding

$V$  =  $B + P + E$  = total value of firm

## 2. PRESENT VALUE OF TAX SHIELD FOR AMORTIZABLE ASSETS

a) Present Value of Total Tax Shield from CCA for a New Asset

$$\text{Present Value} = \frac{CdT}{d+k} \left( \frac{2+k}{2(1+k)} \right) = \frac{CdT}{d+k} \left( \frac{1+0.5k}{1+k} \right)$$

b) Present Value of Total Tax Shield from CCA for an Asset that is Not Newly Acquired

$$\text{Present Value} = UCC \left( \frac{dT}{d+k} \right)$$

c) Present Value of Total Tax Shield Lost From Salvage

$$\text{Present Value} = \frac{S_n}{(1+k)^n} \left( \frac{dT}{d+k} \right) \text{ or } \frac{S_n}{(1+k)^{n-1}} \left( \frac{dT}{d+k} \right), \text{ depending on cash flow assumptions}$$

### Notation for above formulae:

$C$  = net initial investment

$UCC$  = undepreciated capital cost of asset

$S_n$  = salvage value of asset realized at end of year  $n$

$T$  = corporate tax rate

$k$  = discount rate or time value of money

$d$  = maximum rate of capital cost allowance

$n$  = total life of investment

**Table 1**  
**Present Value of One Dollar Due at the End of  $n$  Years**

$$P = \frac{1}{(1+i)^n}$$

$n$	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
<b>01</b>	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
<b>02</b>	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826
<b>03</b>	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751
<b>04</b>	.961	.924	.888	.855	.823	.792	.763	.735	.708	.683
<b>05</b>	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621
<b>06</b>	.942	.888	.837	.790	.746	.705	.666	.630	.596	.564
<b>07</b>	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513
<b>08</b>	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467
<b>09</b>	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424
<b>10</b>	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386
<b>11</b>	.896	.804	.722	.650	.585	.527	.475	.429	.388	.350
<b>12</b>	.887	.788	.701	.625	.557	.497	.444	.397	.356	.319
<b>13</b>	.879	.773	.681	.601	.530	.469	.415	.368	.326	.290
<b>14</b>	.870	.758	.661	.577	.505	.442	.388	.340	.299	.263
<b>15</b>	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239
<b>16</b>	.853	.728	.623	.534	.458	.394	.339	.292	.252	.218
<b>17</b>	.844	.714	.605	.513	.436	.371	.317	.270	.231	.198
<b>18</b>	.836	.700	.587	.494	.416	.350	.296	.250	.212	.180
<b>19</b>	.828	.686	.570	.475	.396	.331	.277	.232	.194	.164
<b>20</b>	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149
<b>21</b>	.811	.660	.538	.439	.359	.294	.242	.199	.164	.135
<b>22</b>	.803	.647	.522	.422	.342	.278	.226	.184	.150	.123
<b>23</b>	.795	.634	.507	.406	.326	.262	.211	.170	.138	.112
<b>24</b>	.788	.622	.492	.390	.310	.247	.197	.158	.126	.102
<b>25</b>	.780	.610	.478	.375	.295	.233	.184	.146	.116	.092

**Table 1 (cont'd)**  
**Present Value of One Dollar Due at the End of  $n$  Years**

$$P = \frac{1}{(1+i)^n}$$

$n$	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
<b>01</b>	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
<b>02</b>	.812	.797	.783	.769	.756	.743	.731	.718	.706	.694
<b>03</b>	.731	.712	.693	.675	.658	.641	.624	.609	.593	.579
<b>04</b>	.659	.636	.613	.592	.572	.552	.534	.516	.499	.482
<b>05</b>	.593	.567	.543	.519	.497	.476	.456	.437	.419	.402
<b>06</b>	.535	.507	.480	.456	.432	.410	.390	.370	.352	.335
<b>07</b>	.482	.452	.425	.400	.376	.354	.333	.314	.296	.279
<b>08</b>	.434	.404	.376	.351	.327	.305	.285	.266	.249	.233
<b>09</b>	.391	.361	.333	.308	.284	.263	.243	.225	.209	.194
<b>10</b>	.352	.322	.295	.270	.247	.227	.208	.191	.176	.162
<b>11</b>	.317	.287	.261	.237	.215	.195	.178	.162	.148	.135
<b>12</b>	.286	.257	.231	.208	.187	.168	.152	.137	.124	.112
<b>13</b>	.258	.229	.204	.182	.163	.145	.130	.116	.104	.093
<b>14</b>	.232	.205	.181	.160	.141	.125	.111	.099	.088	.078
<b>15</b>	.209	.183	.160	.140	.123	.108	.095	.084	.074	.065
<b>16</b>	.188	.163	.142	.123	.107	.093	.081	.071	.062	.054
<b>17</b>	.170	.146	.125	.108	.093	.080	.069	.060	.052	.045
<b>18</b>	.153	.130	.111	.095	.081	.069	.059	.051	.044	.038
<b>19</b>	.138	.116	.098	.083	.070	.060	.051	.043	.037	.031
<b>20</b>	.124	.104	.087	.073	.061	.051	.043	.037	.031	.026
<b>21</b>	.112	.093	.077	.064	.053	.044	.037	.031	.026	.022
<b>22</b>	.101	.083	.068	.056	.046	.038	.032	.026	.022	.018
<b>23</b>	.091	.074	.060	.049	.040	.033	.027	.022	.018	.015
<b>24</b>	.082	.066	.053	.043	.035	.028	.023	.019	.015	.013
<b>25</b>	.074	.059	.047	.038	.030	.024	.020	.016	.013	.010

**Table 1 (cont'd)**  
**Present Value of One Dollar Due at the End of  $n$  Years**

$$P = \frac{1}{(1+i)^n}$$

$n$	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
01	0.826	0.820	0.813	0.806	0.800	0.794	0.787	0.781	0.775	0.769
02	.683	.672	.661	.650	.640	.630	.620	.610	.601	.592
03	.564	.551	.537	.524	.512	.500	.488	.477	.466	.455
04	.467	.451	.437	.423	.410	.397	.384	.373	.361	.350
05	.386	.370	.355	.341	.328	.315	.303	.291	.280	.269
06	.319	.303	.289	.275	.262	.250	.238	.227	.217	.207
07	.263	.249	.235	.222	.210	.198	.188	.178	.168	.159
08	.218	.204	.191	.179	.168	.157	.148	.139	.130	.123
09	.180	.167	.155	.144	.134	.125	.116	.108	.101	.094
10	.149	.137	.126	.116	.107	.099	.092	.085	.078	.073
11	.123	.112	.103	.094	.086	.079	.072	.066	.061	.056
12	.102	.092	.083	.076	.069	.062	.057	.052	.047	.043
13	.084	.075	.068	.061	.055	.050	.045	.040	.037	.033
14	.069	.062	.055	.049	.044	.039	.035	.032	.028	.025
15	.057	.051	.045	.040	.035	.031	.028	.025	.022	.020
16	.047	.042	.036	.032	.028	.025	.022	.019	.017	.015
17	.039	.034	.030	.026	.023	.020	.017	.015	.013	.012
18	.032	.028	.024	.021	.018	.016	.014	.012	.010	.009
19	.027	.023	.020	.017	.014	.012	.011	.009	.008	.007
20	.022	.019	.016	.014	.012	.010	.008	.007	.006	.005
21	.018	.015	.013	.011	.009	.008	.007	.006	.005	.004
22	.015	.013	.011	.009	.007	.006	.005	.004	.004	.003
23	.012	.010	.009	.007	.006	.005	.004	.003	.003	.002
24	.010	.008	.007	.006	.005	.004	.003	.003	.002	.002
25	.009	.007	.006	.005	.004	.003	.003	.002	.002	.001

**Table 1 (cont'd)**  
**Present Value of One Dollar Due at the End of  $n$  Years**

$$P = \frac{1}{(1+i)^n}$$

$n$	31%	32%	33%	34%	35%	36%	37%	38%	39%	40%
<b>01</b>	0.763	0.758	0.752	0.746	0.741	0.735	0.730	0.725	0.719	0.714
<b>02</b>	.583	.574	.565	.557	.549	.541	.533	.525	.518	.510
<b>03</b>	.445	.435	.425	.416	.406	.398	.389	.381	.372	.364
<b>04</b>	.340	.329	.320	.310	.301	.292	.284	.276	.268	.260
<b>05</b>	.259	.250	.240	.231	.223	.215	.207	.200	.193	.186
<b>06</b>	.198	.189	.181	.173	.165	.158	.151	.145	.139	.133
<b>07</b>	.151	.143	.136	.129	.122	.116	.110	.105	.100	.095
<b>08</b>	.115	.108	.102	.096	.091	.085	.081	.076	.072	.068
<b>09</b>	.088	.082	.077	.072	.067	.063	.059	.055	.052	.048
<b>10</b>	.067	.062	.058	.054	.050	.046	.043	.040	.037	.035
<b>11</b>	.051	.047	.043	.040	.037	.034	.031	.029	.027	.025
<b>12</b>	.039	.036	.033	.030	.027	.025	.023	.021	.019	.018
<b>13</b>	.030	.027	.025	.022	.020	.018	.017	.015	.014	.013
<b>14</b>	.023	.021	.018	.017	.015	.014	.012	.011	.010	.009
<b>15</b>	.017	.016	.014	.012	.011	.010	.009	.008	.007	.006
<b>16</b>	.013	.012	.010	.009	.008	.007	.006	.006	.005	.005
<b>17</b>	.010	.009	.008	.007	.006	.005	.005	.004	.004	.003
<b>18</b>	.008	.007	.006	.005	.005	.004	.003	.003	.003	.002
<b>19</b>	.006	.005	.004	.004	.003	.003	.003	.002	.002	.002
<b>20</b>	.005	.004	.003	.003	.002	.002	.002	.002	.001	.001
<b>21</b>	.003	.003	.003	.002	.002	.002	.001	.001	.001	.001
<b>22</b>	.003	.002	.002	.002	.001	.001	.001	.001	.001	.001
<b>23</b>	.002	.002	.001	.001	.001	.001	.001	.001	.001	.001
<b>24</b>	.002	.001	.001	.001	.001	.001	.001	.001	.001	.001
<b>25</b>	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001

**Table 2**  
**Present Value of One Dollar Per Year —  $n$  Years at  $i\%$**

$$P_n = \frac{1 - \left( \frac{1}{(1+i)^n} \right)}{i}$$

$n$	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
<b>01</b>	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
<b>02</b>	1.970	1.942	1.914	1.886	1.859	1.833	1.808	1.783	1.759	1.736
<b>03</b>	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
<b>04</b>	3.902	3.808	3.717	3.630	3.547	3.465	3.387	3.312	3.240	3.170
<b>05</b>	4.854	4.713	4.580	4.452	4.330	4.212	4.100	3.993	3.890	3.791
<b>06</b>	5.796	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
<b>07</b>	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
<b>08</b>	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
<b>09</b>	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
<b>10</b>	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
<b>11</b>	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
<b>12</b>	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
<b>13</b>	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
<b>14</b>	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.224	7.786	7.367
<b>15</b>	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.560	8.061	7.606
<b>16</b>	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
<b>17</b>	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
<b>18</b>	16.398	14.992	13.753	12.659	11.690	10.828	10.059	9.372	8.756	8.201
<b>19</b>	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
<b>20</b>	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514
<b>21</b>	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.292	8.649
<b>22</b>	19.661	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.442	8.772
<b>23</b>	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.580	8.883
<b>24</b>	21.244	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.707	8.985
<b>25</b>	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077

**Table 2 (cont'd)**  
**Present Value of One Dollar Per Year —  $n$  Years at  $i\%$**

$$P_n = \frac{1 - \left( \frac{1}{(1+i)^n} \right)}{i}$$

$n$	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
<b>01</b>	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.848	0.840	0.833
<b>02</b>	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
<b>03</b>	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.107
<b>04</b>	3.102	3.037	2.975	2.914	2.855	2.798	2.743	2.690	2.639	2.589
<b>05</b>	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
<b>06</b>	4.231	4.111	3.998	3.889	3.785	3.685	3.589	3.498	3.410	3.326
<b>07</b>	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
<b>08</b>	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
<b>09</b>	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
<b>10</b>	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.193
<b>11</b>	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.487	4.327
<b>12</b>	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
<b>13</b>	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
<b>14</b>	6.982	6.628	6.303	6.002	5.725	5.468	5.229	5.008	4.802	4.611
<b>15</b>	7.191	6.811	6.462	6.142	5.847	5.576	5.324	5.092	4.876	4.676
<b>16</b>	7.379	6.974	6.604	6.265	5.954	5.669	5.405	5.162	4.938	4.730
<b>17</b>	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
<b>18</b>	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
<b>19</b>	7.839	7.366	6.938	6.550	6.198	5.878	5.585	5.316	5.070	4.844
<b>20</b>	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870
<b>21</b>	8.075	7.562	7.102	6.687	6.313	5.973	5.665	5.384	5.127	4.891
<b>22</b>	8.176	7.645	7.170	6.743	6.359	6.011	5.696	5.410	5.149	4.909
<b>23</b>	8.266	7.718	7.230	6.792	6.399	6.044	5.723	5.432	5.167	4.925
<b>24</b>	8.348	7.784	7.283	6.835	6.434	6.073	5.747	5.451	5.182	4.937
<b>25</b>	8.422	7.843	7.330	6.873	6.464	6.097	5.766	5.467	5.195	4.948



**Table 2 (cont'd)**  
**Present Value of One Dollar Per Year —  $n$  Years at  $i\%$**

$$P_n = \frac{1 - \left( \frac{1}{(1+i)^n} \right)}{i}$$

$n$	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
01	0.826	0.820	0.813	0.807	0.800	0.794	0.787	0.781	0.775	0.769
02	1.510	1.492	1.474	1.457	1.440	1.424	1.407	1.392	1.376	1.361
03	2.074	2.042	2.011	1.981	1.952	1.923	1.896	1.868	1.842	1.816
04	2.540	2.494	2.448	2.404	2.362	2.320	2.280	2.241	2.203	2.166
05	2.926	2.864	2.804	2.745	2.689	2.635	2.583	2.532	2.483	2.436
06	3.245	3.167	3.092	3.021	2.951	2.885	2.821	2.759	2.700	2.643
07	3.508	3.416	3.327	3.242	3.161	3.083	3.009	2.937	2.868	2.802
08	3.726	3.619	3.518	3.421	3.329	3.241	3.156	3.076	2.999	2.925
09	3.905	3.786	3.673	3.566	3.463	3.366	3.273	3.184	3.100	3.019
10	4.054	3.923	3.799	3.682	3.571	3.465	3.364	3.269	3.178	3.092
11	4.177	4.035	3.902	3.776	3.656	3.543	3.437	3.335	3.239	3.147
12	4.279	4.127	3.985	3.851	3.725	3.606	3.493	3.387	3.286	3.190
13	4.362	4.203	4.053	3.912	3.780	3.656	3.538	3.427	3.322	3.223
14	4.432	4.265	4.108	3.962	3.824	3.695	3.573	3.459	3.351	3.249
15	4.489	4.315	4.153	4.001	3.859	3.726	3.601	3.483	3.373	3.268
16	4.536	4.357	4.189	4.033	3.887	3.751	3.623	3.503	3.390	3.283
17	4.576	4.391	4.219	4.059	3.910	3.771	3.640	3.518	3.403	3.295
18	4.608	4.419	4.243	4.080	3.928	3.786	3.654	3.529	3.413	3.304
19	4.635	4.442	4.263	4.097	3.942	3.799	3.664	3.539	3.421	3.311
20	4.657	4.460	4.279	4.110	3.954	3.808	3.673	3.546	3.427	3.316
21	4.675	4.476	4.292	4.121	3.963	3.816	3.679	3.551	3.432	3.320
22	4.690	4.488	4.302	4.130	3.971	3.822	3.684	3.556	3.436	3.323
23	4.703	4.499	4.311	4.137	3.976	3.827	3.689	3.559	3.438	3.325
24	4.713	4.507	4.318	4.143	3.981	3.831	3.692	3.562	3.441	3.327
25	4.721	4.514	4.323	4.147	3.985	3.834	3.694	3.564	3.442	3.329

**Table 2 (cont'd)**  
**Present Value of One Dollar Per Year —  $n$  Years at  $i\%$**

$$P_n = \frac{1 - \left( \frac{1}{(1+i)^n} \right)}{i}$$

$n$	31%	32%	33%	34%	35%	36%	37%	38%	39%	40%
<b>01</b>	0.763	0.758	0.752	0.746	0.741	0.735	0.730	0.725	0.719	0.714
<b>02</b>	1.346	1.332	1.317	1.303	1.289	1.276	1.263	1.250	1.237	1.225
<b>03</b>	1.791	1.766	1.742	1.719	1.696	1.674	1.652	1.630	1.609	1.589
<b>04</b>	2.131	2.096	2.062	2.029	1.997	1.966	1.936	1.906	1.877	1.849
<b>05</b>	2.390	2.345	2.302	2.260	2.220	2.181	2.143	2.106	2.070	2.035
<b>06</b>	2.588	2.534	2.483	2.433	2.385	2.339	2.294	2.251	2.209	2.168
<b>07</b>	2.739	2.678	2.619	2.562	2.508	2.455	2.404	2.356	2.308	2.263
<b>08</b>	2.854	2.786	2.721	2.658	2.598	2.540	2.485	2.432	2.380	2.331
<b>09</b>	2.942	2.868	2.798	2.730	2.665	2.603	2.544	2.487	2.432	2.379
<b>10</b>	3.009	2.930	2.855	2.784	2.715	2.650	2.587	2.527	2.469	2.414
<b>11</b>	3.060	2.978	2.899	2.824	2.752	2.683	2.618	2.556	2.496	2.438
<b>12</b>	3.100	3.013	2.931	2.853	2.779	2.708	2.641	2.576	2.515	2.456
<b>13</b>	3.129	3.040	2.956	2.876	2.799	2.727	2.658	2.592	2.529	2.469
<b>14</b>	3.152	3.061	2.974	2.892	2.814	2.740	2.670	2.603	2.539	2.478
<b>15</b>	3.170	3.076	2.988	2.905	2.826	2.750	2.679	2.611	2.546	2.484
<b>16</b>	3.183	3.088	2.999	2.914	2.834	2.758	2.685	2.616	2.551	2.489
<b>17</b>	3.193	3.097	3.007	2.921	2.840	2.763	2.690	2.621	2.555	2.492
<b>18</b>	3.201	3.104	3.012	2.926	2.844	2.767	2.693	2.624	2.557	2.494
<b>19</b>	3.207	3.109	3.017	2.930	2.848	2.770	2.696	2.626	2.559	2.496
<b>20</b>	3.211	3.113	3.020	2.933	2.850	2.772	2.698	2.627	2.561	2.497
<b>21</b>	3.215	3.116	3.023	2.935	2.852	2.773	2.699	2.629	2.562	2.498
<b>22</b>	3.217	3.118	3.025	2.937	2.853	2.775	2.700	2.629	2.562	2.499
<b>23</b>	3.219	3.120	3.026	2.938	2.854	2.775	2.701	2.630	2.563	2.499
<b>24</b>	3.221	3.121	3.027	2.939	2.855	2.776	2.701	2.630	2.563	2.499
<b>25</b>	3.222	3.122	3.028	2.939	2.856	2.777	2.702	2.631	2.563	2.499