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**THE EXPECTED EFFECT OF ACTIVATING  
ACCOUNTING LEARNING COMMUNITIES IN  
THE INTERNATIONAL UNIVERSITIES**

بجث مقدم من  
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٢٠٠٩

**Abstract:** The International Universities ( I U ) are witnessing new trends in the education field, noticeably, what is so called learning communities. Learning communities rely on clustering classes around interdisciplinary theme and it coordinate two or more courses into a single program. In the business administration studies, accounting is considered the heart of various sciences such as, financial management, engineering, pharmacies, medicine, education, mathematics, statistics, biotechnology, and computer sciences, where it all benefit from accounting, and accounting benefits from all of these sciences alike. Consequently, practitioners in these fields will be benefited. Accordingly, the demand for our accounting learning communities has arose to satisfy the exchangeable needs among students, educators, and practitioners in various fields. This paper reviewed a sample of responses from 13 practitioners representing various practices including accounting practice in Egypt ( Sample B ). Where they were asked to respond to a questionnaire regarding the activation of accounting learning communities over the Egyptian universities, giving an indication for what could be applied in the IU in the same regard. This paper uses Descriptive statistics and Kruskal - Wallis tests to analyze responses. In order to reflect the value of raising a question of what is the expected effect of activating accounting learning communities in the IU , the survey study in this paper to be implemented to examine the expected impact of activating accounting learning communities in the IU over students, educators, and practitioners in various fields, based on a questionnaire to be provided to them ( Sample A ) . Empirical results indicated, primarily, the significance expected effect of activating accounting learning communities in the IU based on the responses of the 13 practitioners' descriptive statistics, and unobvious expected effect based on the Kruskul - Wallis test's result i therefore, more questionnaires to be provided to larger number of students, educators, and practitioner, ( Sample A&B), accompanied with a prove of persuading future vision of polices, practices and relations to be implemented by the IU to help measure positive effect of activating accounting learning communities.

**Key words:** Accounting learning communities, Egyptian universities, The International universities.

**Data Availability** / Data are available from the author

## I. Introduction

Learning communities are a variety of approaches that link or cluster classes, during a given term, often around an interdisciplinary theme, and enroll a common cohort of students [ Gabelnick, F. & et. el., 1990 ] .Thus, learning communities are also considered an approach to curriculum design which coordinates two or more courses into a single program of instructions [ Jean MacGregor & et. el., 2002 ]

It is important because, within learning communities the shared interest in certain outcomes parallels with the phenomenon of shared interest observed in theoretical bodies of work such as communities of practice. [ Lave & wanger, 1991, Wenger, 1998] . It represents an international restructuring of students' time, credit, and learning experiences to build community and to foster more explicit connections

among students and their teachers, and among disciplines [ Gablenick, & et.el., 1990] provides a richer range of learning experience to our students and contribute to a more vibrant and supportive campus environment for students and faculty alike.

Learning communities could be structured as programs in which a small cohort of students enrolls in larger classes that faculty do not coordinate, intellectual connections and community - building often take place in an additional integrative seminar, also, programs of two or more classes linked thematically or by content, which a cohort of students takes together. The faculty do plan the program collaboratively, also programs of course work that faculty members team teach. The course work is embedded in an integrated program of study [ Jean MacGregor & et.el., 2002 ].

Applying learning communities to the field of accounting is expected to achieve various benefits for both students and educators, such as: the academically and socially growing among students and educators in any accounting program, and, the participation in various academic events and activities with people from a variety of backgrounds and programs.

Various models of learning communities to be applied in the field of accounting, relying on mixing programs of accounting and its related sciences, this mixed programs and structure comprise models of learning communities based on the importance and necessity of meeting the needs of students and educators, which in turn will lead to enhancing and developing skills such as team work, communication, problem solving, and critical thinking.

Accordingly, the response of accounting students as well as the accounting educators will be affected, where they may accept the learning communities' programs and structure or they may oppose it in regards of challenges that may be available and encountered by students and educators as well.

This paper measures the initial effect of activating learning communities over accounting students and educators through raising questions that are significantly related to their opinions and trends, through a questionnaire to be distributed, firstly, to 13 practitioners of various fields, and, secondary, to students and educators of undergraduate , post graduate , and continuing education in the AUC.

The remainder of this paper is structured as follows: The second section describes this paper's hypothesis, followed by section three about data and proposed model specification to be applied , then the fourth section describes the actual and expected results, and the fifth section is about the conclusions.

## **II. Hypothesis development**

Using Kruskal-Wallis test (  $H$  ), which is one of the non- parametric tests for - one - way design to measure the effect of activating accounting learning communities m the IU , involves two hypothesis for this paper, shown as follows:

The null hypothesis ( $H_0$ ) / The distribution of the students' and educators' responses to the questionnaire regarding activating accounting learning communities

in the IU are equal

The alternate hypothesis ( $H_1$ ) / The distribution of the students' and educators' responses to the questionnaire regarding activating accounting learning communities in the IU are not all equal. Which in turn indicate significance variances in the responses of the sample of students and educators.

In addition to the above two hypothesis, the following five hypothesis are to be taken into account within this paper's questionnaire.

- 1- There are obvious practices for the activation of accounting learning communities to help develop students and educators qualifications ( Reflected in questions: 4,5,6 &7)
- 2- There are significant relationship between activating accounting learning communities' models and various parties in the IU ( Reflected in questions: 8,9,10 &12)
- 3- Activating accounting learning communities significantly impact developing the education environment in the IU (Reflected in questions: 12,13,14,15,16,17,18,19,20,21,22,23 &24)
- 4- There are obvious polices to develop students and educators in the IU ( Reflected in questions: 4,5,8,9,10,13,14,16,17,18,19,20,21,22 &23 )

Lack of corporation among students and among educators leads to difficulty of achieving educations goals in the IU ( Reflected in questions: 1,2,3,11 &24) .

### **III. Data & Model Specification**

Data and model specification in this section reflects the proposed idea of this paper to be applied in the coming periods once the questionnaire's data are successfully collected in the IU.

#### **Data /**

**Sample A)** Four types of data are required to help proceeding this proposed paper. It is as follows:

- Sample of accounting students in the four grades of accounting, it ranges from 100:150 accounting students
- Sample of accounting educators who are actively teach in the field of accounting , it ranges from 100:150 accounting educators
- Sample of administrative stuff, it ranges from 100:150 employers
- Sample of questions embedded in the proposed questionnaire, it reflects 24 questions.

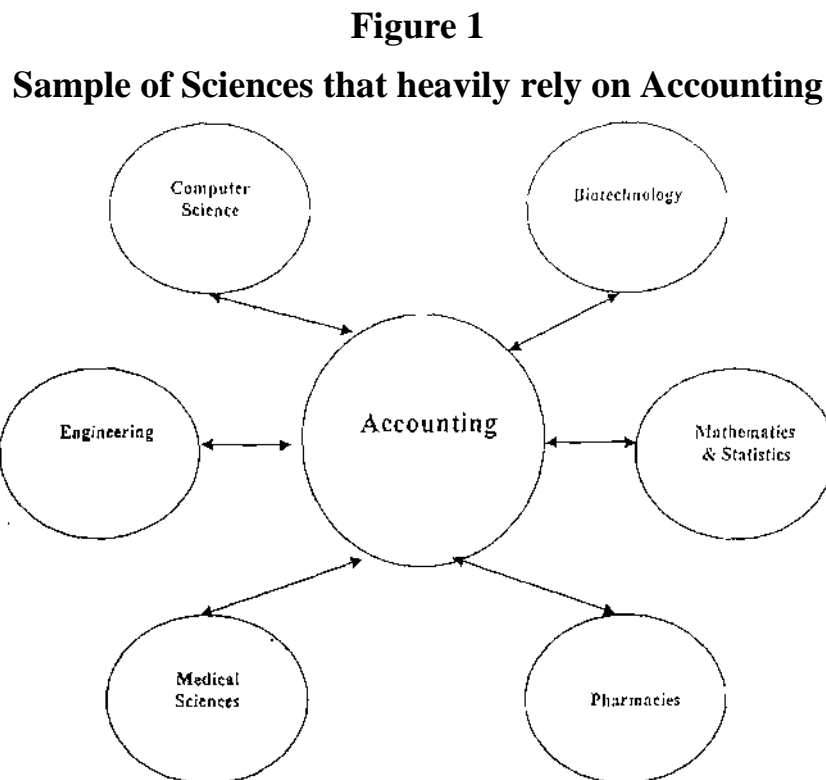
**Sample B)** Other data will be collected from the practice, it is very low, as it is an initial sample used to reflect an initial vision of expected responses in the IU in regard of accounting learning communities. This sample is the responses of 13 practitioners in the field of accounting, financial management, engineering,

pharmacies, medicine, education, mathematics, statistics, biotechnology, and computer sciences, who have graduated from several universities in Egypt, to the 24 question embedded in the questionnaire.

**The Questionnaire** / It is prepared to include 24 main questions covering the additional five hypothesis introduced in section III, and it will be introduced to the sample mentioned above in (A), it takes the form in appendix 1

This questionnaire was introduced to the sample mentioned above in (B) and the results are explained in section IV.

Based on questions 13 - 24 , accounting is considered the heart of all other sciences that heavily interrelated to accounting. The following figure shows a sample of this interrelation:



### **The Model**

The questionnaire involves the students' and educators' sample response to the questions ( Sample A & B ) , N, and there are ranks in there samples  $(j) = R' j$  , and an average for all ranks  $= R'$  for the purposes of building a model which help in calculating Descriptive statistics and Kruskal - Wallis test ( H ). ( H ) is based on a test statistics calculated from ranks established by pooling the observations from C independent simple random sample, where  $C > 2$ . The null hypothesis is that the populations are identically distributed or alternatively, that the sample were drawn from C identical populations [ Hamburg & Young 2000 ].

The test statistic ( H ) involves a comparison of the variation of the ranks of the sample groups. The ( H ) test is as follows:

$$H = \frac{12 \sum n_j (\bar{R}_j - \bar{R})^2}{N + (N + 1)} \dots\dots\dots (1)$$

This paper uses the Minitab statistical package to calculate the ( H' ) test for the sample understudy, then interprets the results for the purpose of reaching to responses to each of the questionnaire's questions regarding activating accounting learning communities in the AUC.

#### IV. Results

Panel A of Table 1 shows the descriptive statistics results of the 13 practitioners' response to the 24 questions embedded in the under study questionnaire . Analyzing results shown, we find the most significant median, average rank and Z is for the response 2 ( Agree ) in accordance to Likert scale, indicating a primarily consensus among practitioners that the expected effect of activating accounting learning communities in the Egyptian universities along with the IU will be of high significant.

Panel B of Table 1 shows the Kruskal-Wallis statistics ( H statistic ) for the responses = 68.36 at degrees of freedom = 4 ( K - 1 = 5 -1 = 4) and significance level of 0.005.

Testing the null hypothesis H<sub>0</sub> at significance level 0.005, and using the Chi-square probabilities table of critical values ( X<sup>2</sup> ) in appendix 3, we find ( H ) is greater than the critical value of 14.86, and we accept the alternate hypothesis H<sub>1</sub> that the distributions are not all equal, indicating various variances in the responses among the practitioners, making the expected effect of activating accounting learning communities in the IU remain unobvious, until more questionnaires to be done and responses to be collected in the same regard, which in turn, raise the necessity of providing much more positive efforts by the IU in terms of policies, efforts, and predictions of visions used to activate accounting learning communities in the IU , where as, responses' weaknesses were found in the area of questions 4,5,6,7,8, and 9, which represent the expected practices and polices to be used by the universities in activating accounting learning communities and its consequences in regards of the relations among various parties in the universities, this is a kind of challenge to the universities, where they are required to prove a persuading future vision to sample A & B about its polices and practices to be implemented in the context of activating accounting learning communities in the universities.

**Table 1**  
**Descriptive Statistics of the Responses**

Panel A: Descriptive

| Statistics Responses in accordance to Likert scale | n   | Median    | Average Rank | Z     |
|--|-----|-----------|--------------|-------|
| 1  | 24  | 1.50 E+00 | 62.2         | 0.27  |
| 2  | 24  | 6.50 E+00 | 103.8        | 6.81  |
| 3  | 24  | 3.00 E+00 | 68.1         | 1.19  |
| 4  | 24  | 0.00 E+00 | 42.5         | -2.84 |
| 5  | 24  | 0.00 E+00 | 26.0         | -5.43 |
| Overall  | 120 |           | 60.5         |       |

Panel B: Kruskal - Wallis Test

H = 68.36

DF= 4

P= 0.000

## V. Conclusions

This paper contributes to expecting the effect of activating accounting learning communities in the IU over students, educators, and practitioners by collecting and analyzing responses of 13 practitioners in various fields to a questionnaire provided to them, including 24 main questions related to the effect of the activation.

The results, on one hand, suggest primarily consensus among the 13 practitioners, because of their agreement upon the significance effect based on the descriptive statistics analysis, and on the other hand, the results suggest unobvious expected effect based on the ( H ) statistic's results, because the alternate hypothesis suggests that the population are not all equal, indicating significance variances in the responses of the 13 practitioners' sample ( sample B ), due to the differences in responses among them for the overall sample of questions.

The results of the analysis leads to what is expected to be in the IU in the same regard when applying the same study over the IU's responses to be collected, therefore, the IU, based on the analysis of sample B's responses, should prove a persuading future vision of polices, practices, and relations to be implemented by the IU to help measure positive effect of activating accounting learning communities. This will open the field for future research in this regard in the IU.



## Appendix 1

### The Questionnaire

This questionnaire was prepared for the purpose of, the initial measuring of the impact of activating a trend that would affect the accounting students, accounting teachers, and practitioners in various fields, this trend is known , in universities, as " Learning Communities" .

#### Basic definitions before answering the questionnaire

- **Learning communities:** known as a set of approaches link and cluster various classes in a given term, These classes are often linked and related to various scientific fields. It coordinates one or two syllabuses into one program to be introduced to the students. In order to contribute to the skill development of students and educators in regards of team work, communications, problem solving, and critical thinking.
- **For example: Accounting / Pharmacies / Engineering /**

**Medicine program** ..... This program to be introduced to students of pharmacies, engineering, medicine, accounting, for the purpose of benefiting them and giving them various experiences due to their participation in various academic activities with experts from different fields. Whereas, accounting serves the pharmacists, the engineer, the doctor, in practice, it also helps them to make various investment decisions. It is important for the accountant to realize some of the fundamentals of pharmacy, engineering, medicine, in order to be able to identify the cost of particular product, and to measure profit or loss of engineering or medical process.

#### Guidelines when answering the questionnaire:

- 1- It is preferable to read the statement as one unit before answering the questions
- 2- Posit (True ) in front of your responds
- 3- If you need to comment, so briefly do so
- 4- Please add any additional information might be necessary for the questionnaire in the end of the statement We do appreciate your corporation.

| The Questions   | The responses  |       |          |          |                   |
|---|----------------|-------|----------|----------|-------------------|
| <p>Q. 1) The understandability and dialogue among students and among educators will be positive after activating accounting learning communities</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> | Strongly agree | Agree | Not Sure | Disagree | Strongly disagree |
| <p>Q.2) Impression of students and educators regarding activating accounting learning communities in the IU is optimistic</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>                        |                |       |          |          |                   |
| <p>Q.3) Expected vision of governmental universities to the activation of accounting learning communities is optimistic</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>                          |                |       |          |          |                   |
| <p>Q.4) Efforts to be done to activate accounting learning communities in the IU is burdensome</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>   |                |       |          |          |                   |
| <p>Q.5) The expected aids to be introduced in regard of capitalizing the activation of accounting learning communities is optimistic.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>            |                |       |          |          |                   |
| <p>Q.6) The expected quality of services to be introduced by the IU to activate accounting</p>  |                |       |          |          |                   |

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| <p>learning communities is high</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>  |  |  |  |  |  |
| <p>Q.7) The expected quality of facilities to be introduced by the IU to activate accounting learning communities is high</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>                                    |  |  |  |  |  |
| <p>Q.8) The expectation regarding the quality of procedures to be followed by the IU to activate accounting learning communities is positive and beneficiary</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> |  |  |  |  |  |
| <p>Q.9) The expected time and efforts required to approve the activation of accounting learning communities will be high</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>                                     |  |  |  |  |  |
| <p>Q.10) The expected quality of accounting learning communities models to be applied over students and educators will be high</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>                               |  |  |  |  |  |
| <p>Q.11) The activation of accounting learning communities will achieve the potential goals.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>   |  |  |  |  |  |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| .....  |  |  |  |  |  |
| Q.12) Your expected benefits from activating accounting learning communities is optimistic<br>.....<br>.....<br>.....<br>.....<br>.....      |  |  |  |  |  |
| Q.13) First-year students enroll in the Accounting and financial management program<br>.....<br>.....<br>.....<br>.....<br>.....             |  |  |  |  |  |
| Q.14) First-year students enroll in Biotechnology / Chartered Accounting and Finance.<br>.....<br>.....<br>.....<br>.....<br>.....           |  |  |  |  |  |
| Q.15) First-year students enroll in Computing / Financial Management, program<br>.....<br>.....<br>.....<br>.....<br>.....                   |  |  |  |  |  |
| Q. 16) First - year students enroll in Mathematics / Chartered Accounting and Finance<br>.....<br>.....<br>.....<br>.....<br>.....           |  |  |  |  |  |
| Q.17) Upper-year accounting and finance enroll in the Accounting / Financial management program<br>.....<br>.....<br>.....<br>.....<br>..... |  |  |  |  |  |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| .....  |  |  |  |  |  |
| Q.18) Upper - year accounting and finance enroll in the Biotechnology / Chartered accounting and finance program<br>.....<br>.....<br>.....<br>.....<br>.....  |  |  |  |  |  |
| Q.19) Upper - year accounting and finance enroll in the Computing Financial management program<br>.....<br>.....<br>.....<br>.....<br>.....  |  |  |  |  |  |
| Q.20) upper - year accounting and finance enroll in the Mathematics / Chartered accounting and finance<br>.....<br>.....<br>.....<br>.....<br>.....  |  |  |  |  |  |
| Q..21) First year students enroll in Principles of Accounting & Accounting tor corporations / Engineering / Computer science / Pharmacies / Medical Sciences programs<br>.....<br>.....<br>.....<br>.....<br>..... |  |  |  |  |  |
| Q.22) First - year student enroll in Principle of accounting & Financial management / Statistics & Mathematics programs<br>.....<br>.....<br>.....<br>.....<br>.....   |  |  |  |  |  |
| Q.23) Upper - year accounting students enroll in Cost accounting , Intermediate accounting&  |  |  |  |  |  |

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| <p>international accounting / Engineering /<br/>Computer science / Pharmacies / Medical<br/>Sciences programs</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>  |  |  |  |  |  |
| <p>Q.24) Activating learning communities help<br/>students better develop their skills in regards of<br/>team working, critical thinking,<br/>communication, problem solving</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> |  |  |  |  |  |



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## Appendix II

### The Minitab's results of Descriptive and ( H ) Tests

#### Kruskal-Wallis Test

Kruskal-Wallis Test on RESPONSES

| LIKERT A | N   | Median    | Ave Rank | Z     |
|----------|-----|-----------|----------|-------|
| 1        | 24  | 1.50 E+00 | 62.2     | 0.27  |
| 2        | 24  | 6.50 E+00 | 103.8    | 6.81  |
| 3        | 24  | 3.00 E+00 | 68.1     | 1.19  |
| 4        | 24  | 0.00 E+00 | 42.5     | -2.84 |
| 5        | 24  | 0.00 E+00 | 26.0     | -5.43 |
| Overall  | 120 |           | 60.5     |       |

H = 68.36 DF = 4 P = 0.000

H = 74.27 DF = 4 P = 0.000 (adjusted for ties)



### Appendix III

#### Chi-Square Probabilities X

| df  | 0.995  | 0.99   | 0.975  | 0.95   | 0.90   | 0.10    | 0.05    | 0.025   | 0.01    | 0.005   |
|-----|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 1   | ...    | ...    | 0.001  | 0.004  | 0.016  | 2.706   | 3.841   | 5.024   | 6.635   | 7.879   |
| 2   | 0.010  | 0.020  | 0.051  | 0.103  | 0.211  | 4.605   | 5.991   | 7.378   | 9.210   | 10.597  |
| 3   | 0.072  | 0.115  | 0.216  | 0.352  | 0.584  | 6.251   | 7.815   | 9.348   | 11.345  | 12.838  |
| 4   | 0.207  | 0.297  | 0.484  | 0.711  | 1.064  | 7.779   | 9.488   | 11.143  | 13.277  | 14.860  |
| 5   | 0.412  | 0.554  | 0.831  | 1.145  | 1.610  | 9.236   | 11.070  | 12.833  | 15.086  | 16.750  |
| 6   | 0.676  | 0.872  | 1.237  | 1.635  | 2.204  | 10.645  | 12.592  | 14.449  | 16.812  | 18.548  |
| 7   | 0.989  | 1.239  | 1.690  | 2.167  | 2.833  | 12.017  | 14.067  | 16.013  | 18.475  | 20.278  |
| 8   | 1.344  | 1.646  | 2.180  | 2.733  | 3.490  | 13.362  | 15.507  | 17.535  | 20.090  | 21.955  |
| 9   | 1.735  | 2.088  | 2.700  | 3.325  | 4.168  | 14.684  | 16.919  | 19.023  | 21.666  | 23.589  |
| 10  | 2.156  | 2.558  | 3.247  | 3.940  | 4.865  | 15.987  | 18.307  | 20.483  | 23.209  | 25.188  |
| 11  | 2.603  | 3.053  | 3.816  | 4.575  | 5.578  | 17.275  | 19.675  | 21.920  | 24.725  | 26.757  |
| 12  | 3.074  | 3.571  | 4.404  | 5.226  | 6.304  | 18.549  | 21.026  | 23.337  | 26.217  | 28.300  |
| 13  | 3.565  | 4.107  | 5.009  | 5.892  | 7.042  | 19.812  | 22.362  | 24.736  | 27.688  | 29.819  |
| 14  | 4.075  | 4.660  | 5.629  | 6.571  | 7.790  | 21.064  | 23.685  | 26.119  | 29.141  | 31.319  |
| 15  | 4.601  | 5.229  | 6.262  | 7.261  | 8.547  | 22.307  | 24.996  | 27.488  | 30.578  | 32.801  |
| 16  | 5.142  | 5.812  | 6.908  | 7.962  | 9.312  | 23.542  | 26.296  | 28.845  | 32.000  | 34.267  |
| 17  | 5.697  | 6.408  | 7.564  | 8.672  | 10.085 | 24.769  | 27.587  | 30.191  | 33.409  | 35.718  |
| 18  | 6.265  | 7.015  | 8.231  | 9.390  | 10.865 | 25.989  | 28.869  | 31.526  | 34.805  | 37.156  |
| 19  | 6.844  | 7.633  | 8.907  | 10.117 | 11.651 | 27.204  | 30.144  | 32.852  | 36.191  | 38.582  |
| 20  | 7.434  | 8.260  | 9.591  | 10.851 | 12.443 | 28.412  | 31.410  | 34.170  | 37.566  | 39.997  |
| 21  | 8.034  | 8.897  | 10.283 | 11.591 | 13.240 | 29.615  | 32.671  | 35.479  | 38.932  | 41.401  |
| 22  | 8.643  | 9.542  | 10.982 | 12.338 | 14.041 | 30.813  | 33.924  | 36.781  | 40.289  | 42.796  |
| 23  | 9.260  | 10.196 | 11.689 | 13.091 | 14.848 | 32.007  | 35.172  | 38.076  | 41.638  | 44.181  |
| 24  | 9.886  | 10.856 | 12.401 | 13.848 | 15.659 | 33.196  | 36.415  | 39.364  | 42.980  | 45.559  |
| 25  | 10.520 | 11.524 | 13.120 | 14.611 | 16.473 | 34.382  | 37.652  | 40.646  | 44.314  | 46.928  |
| 26  | 11.160 | 12.198 | 13.844 | 15.379 | 17.292 | 35.563  | 38.885  | 41.923  | 45.642  | 48.290  |
| 27  | 11.808 | 12.879 | 14.573 | 16.151 | 18.114 | 36.741  | 40.113  | 43.195  | 46.963  | 49.645  |
| 28  | 12.461 | 13.565 | 15.308 | 16.928 | 18.939 | 37.916  | 41.337  | 44.461  | 48.278  | 50.993  |
| 29  | 13.121 | 14.256 | 16.047 | 17.708 | 19.768 | 39.087  | 42.557  | 45.722  | 49.588  | 52.336  |
| 30  | 13.787 | 14.953 | 16.791 | 18.493 | 20.599 | 40.256  | 43.773  | 46.979  | 50.892  | 53.672  |
| 40  | 20.707 | 22.164 | 24.433 | 26.509 | 29.051 | 51.805  | 55.758  | 59.342  | 63.691  | 66.766  |
| 50  | 27.991 | 29.707 | 32.357 | 34.764 | 37.689 | 63.167  | 67.505  | 71.420  | 76.154  | 79.490  |
| 60  | 35.534 | 37.485 | 40.482 | 43.188 | 46.459 | 74.397  | 79.082  | 83.298  | 88.379  | 91.952  |
| 70  | 43.275 | 45.442 | 48.758 | 51.739 | 55.329 | 85.527  | 90.531  | 95.023  | 100.425 | 104.215 |
| 80  | 51.172 | 53.540 | 57.153 | 60.391 | 64.278 | 96.578  | 101.879 | 106.629 | 112.329 | 116.321 |
| 90  | 59.196 | 61.754 | 65.647 | 69.126 | 73.291 | 107.565 | 113.145 | 118.136 | 124.116 | 128.299 |
| 100 | 67.328 | 70.065 | 74.222 | 77.929 | 82.358 | 118.498 | 124.342 | 129.561 | 135.807 | 140.169 |

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