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## The University of Jordan

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Signature:


Date:

## قرار لجنة المناقشة

نوقشت هذه الرسالة ( مستوى القدرة الرياضية المبكرة للأطفال الإناث في مدينة جدة ما بين الفئة العمرية (٣-٨) سنوات ) وأجيزت بتاريخ يوم الأربعاء ٩ / ٨ / ٢٠٠٦ م.

التوقيع

أعضاء لجنة المناقشة



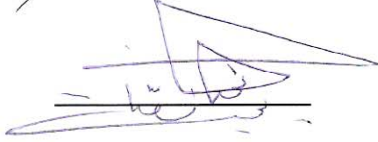
الأستاذ الدكتور خليل محمد عليان ( مشرفاً )  
قياس وتقويم



الأستاذ الدكتور يوسف محمود قطامي ( عضواً )  
تعليم وتعلم



الدكتور يحيى محمود الصمادي (عضواً)  
قياس وتقويم



الدكتور يحيى حياتي نصار (عضواً خارجياً)  
قياس وبحث (الجامعة الهاشمية)

# الإهداء

اهدي جهدي الى نبع العطاء والدتي حفظها الله

والى والدي . . .

نادر، وعبد الرحمن

اللهم اجعلهم عوناً لي

اللهم اجعل هذا الجهد في موانرين أعمالنا

رَبِّهِمْ وَرَبِّ الْعَالَمِينَ : رَبِّ الْعَالَمِينَ رَبِّ الْعَالَمِينَ رَبِّ الْعَالَمِينَ رَبِّ الْعَالَمِينَ رَبِّ الْعَالَمِينَ

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(Test Of Early Mathematics Ability Third

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## الإطار العام للدراسة

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Assimilation

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( Lefevre, 2003) (

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.( Gagne,1985 )

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:(Signal learning )

:( Stimulus –Response Learning )

:( Chaining Learning )

:(Verbal Association Learning )

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:( Multiple- Discrimination Learning)

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:( Concept Learning )

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( Gagne,1985)

:(Principle Learning )

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:(Problem Solving Learning)

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( Capabilities)

.(Gane,1985)

(Gagne,1985)

(Bertrand & Cebula)

.(Hampton, 2002)

(Bruner)

( Enactive Representation) ,

(Iconic Representation )

( Symbolic Representation )

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( Vygotsky)

(Syncreticgrouping)

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## الطريقة و الإجراءات

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	المجموع

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Test of Early Mathematics Ability-)

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.(Baroody,&Benson,2001)

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Ginsburg, ) " " ,

(Russell, 1981

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## المفاهيم الرياضية:

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(Fuson,1988) (

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حقائق الأعداد:

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(Ashcraft,1992)

(Butterworth, & Marschrsini,& Girelli, 2003)

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(Ambros, Beak, & Carpenter,2003)

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## جدول (٢)


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ويعتبر المقياس صادقاً إذا كان هناك فروقاً في الدرجة الكلية, بين الفئات

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**جدول (٥)**  
تحليل تباين الدرجة الكلية بين الفئات العمرية المختلفة

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**جدول (٦)**  
المتوسطات الحسابية حسب الفئات العمرية المختلفة

المتوسط	الفئة العمرية
٨	٤
١٨	٥
٢٨	٦
٤٨	٧
٦٣	٨

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جدول (٧)  
صعوبة فقرات الإختبار للفئات العمرية المختلفة

ثمان سنوات	سبع سنوات	ست سنوات	خمس سنوات	أربع سنوات	الفقرات
١	١	١	١	٠,٩١	١
١	١	١	٠,٩٧	٠,٧٣	٢
١	١	٠,٩٩	٠,٩٩	٠,٨٣	٣
١	١	٠,٩٧	٠,٩٦	٠,٥٤	٤
١	١	١	٠,٩٦	٠,٥٩	٥
١	١	١	٠,٩٩	٠,٨١	٦
١	١	١	٠,٩٩	٠,٦٧	٧
١	١	٠,٩٢	٠,٨١	٠,٤٦	٨
١	١	٠,٩٧	٠,٨٧	٠,٥٧	٩
١	١	٠,٩٩	٠,٩٠	٠,٥٧	١٠
١	١	٠,٩٩	٠,٩٧	٠,٦٠	١١
١	١	١,٠٠	٠,٨٧	٠,٤٧	١٢
١	١	٠,٩٩	٠,٧٠	٠,٥٠	١٣
١	١	٠,٩٢	٠,٦٦	٠,١	١٤
١	١	٠,٨١	٠,٨٢	٠,٨٢	١٥
٠,٩٩	٠,٩٩	٠,٨٣	٠,٧١	٠,٧١	١٦
١	٠,٩٩	٠,٥٥	٠,٥٤	٠,٣٧	١٧
٠,٩٩	٠,٩٧	٠,٦٨	٠,٦١	٠,١٤	١٨
١	١	٠,٩٠	٠,٥٩	٠,٥٧	١٩
١	١	٠,٨٤	٠,٣٩	٠,٢٣	٢٠

١	١	٠,٨٢	٠,٣٠	٠	٢١
٠,٩٩	١	٠,٦٤	٠,١٤	٠	٢٢
١	١	٠,٩١	٠,٦٤	٠	٢٣
٠,٩٧	٠,٩٦	٠,٤٧	٠,١٠	٠	٢٤
٠,٩٩	٠,٩٥	٠,٥٦	٠,٣٦	٠	٢٥
٠,٩٩	٠,٩٩	٠,٥١	٠,٢٦	٠	٢٦
٠,٩٩	٠,٩٣	٠,٤٦	٠,١٠	٠	٢٧
٠,٩٧	٠,٩٧	٠,٨١	٠,١٩	٠	٢٨
٠,٩٩	٠,٩٧	٠,٥٨	٠,٠٧	٠	٢٩
١	٠,٩١	٠,٢٥	٠,٠٣	٠	٣٠
١	٠,٩٩	٠,٥٧	٠,١٠	٠	٣١
٠,٩٧	٠,٩٦	٠,٣٤	٠,٠٦	٠	٣٢
٠,٩٧	٠,٩٥	٠,٦٢	٠,٠١	٠	٣٣
١	٠,٧٥	٠,٣٣	٠	٠	٣٤
٠,٩٩	٠,٨٥	٠,٣١	٠	٠	٣٥
٠,٩٧	٠,٨٣	٠,١٨	٠	٠	٣٦
٠,٩١	٠,٥٥	٠,٠٩	٠	٠	٣٧
١	١	٠,٤٠	٠,٠١	٠	٣٨
٠,٩٦	٠,٧٩	٠,١٤	٠	٠	٣٩
١	٠,٩٥	٠,١٤	٠,٠١	٠	٤٠
٠,٩٩	٠,٦٨	٠,٢٠	٠	٠	٤١
١	٠,٩٣	٠,١٧	٠	٠	٤٢
٠,٩٩	٠,٩٦	٠,٢٢	٠	٠	٤٣
٠,٨٧	٠,٣٣	٠,١٤	٠	٠	٤٤
٠,٧٩	٠,٣١	٠,١١	٠	٠	٤٥
١	٠,٨٠	٠,١٣	٠	٠	٤٦
٠,٨١	٠,٣٣	٠,٠١	٠	٠	٤٧
٠,٨٩	٠,٥١	٠,٠٥	٠	٠	٤٨
٠,٩٤	٠,٦٠	٠	٠	٠	٤٩
٠,٩٠	٠,٦٤	٠,٠٥	٠	٠	٥٠
٠,٩٩	٠,٨٨	٠,٠٥	٠	٠	٥١
٠,٦٦	٠,٤٠	٠,٠٣	٠	٠	٥٢
٠,٦٤	٠,١٦	٠	٠	٠	٥٣
٠,٦٦	٠,١٣	٠	٠	٠	٥٤
٠,٥٧	٠,١٩	٠	٠	٠	٥٥
٠,٩٣	٠,٣٥	٠	٠	٠	٥٦
٠,٦٠	٠,١٩	٠	٠	٠	٥٧
٠,٥٠	٠,١١	٠	٠	٠	٥٨
٠,٨٦	٠,٢٠	٠	٠	٠	٥٩
٠,٥٧	٠,٠٧	٠	٠	٠	٦٠
٠,٩٧	٠,٥٧	٠	٠	٠	٦١
٠,٧٧	٠,٠٩	٠	٠	٠	٦٢
٠,٧١	٠,٠٤	٠	٠	٠	٦٣
٠,٥٠	٠,٠٣	٠	٠	٠	٦٤
٠,٦٦	٠,٠٣	٠	٠	٠	٦٥
٠,٥٠	٠	٠	٠	٠	٦٦
٠,٨٩	٠,٢٥	٠	٠	٠	٦٧
٠,٨٧	٠,٢٨	٠	٠	٠	٦٨

٠,٢٩	٠,٠٣	٠	٠	٠	٦٩
٠,٥٩	٠,٠٥	٠	٠	٠	٧٠
٠,٢٣	٠,٠٤	٠	٠	٠	٧١
٠,٣٠	٠,١	٠	٠	٠	٧٢

جدول (٨)  
الجدول التكراري لتوزيع معاملات الصعوبة

ثمان سنوات	سبع سنوات	ست سنوات	خمس سنوات	أربع سنوات	التكرار
-	١٣	٣١	٤٤	٥٨	٠,٠٩-٠
-	٣	٥	٤	٢	٠,١٩-٠,١
٢	١	٢	٢	١	٠,٢٩-٠,٢٠
-	٣	٣	٣	-	٠,٣٩-٠,٣٠
١	١	٣	١	١	٠,٤٩-٠,٤٠
٦	٢	٥	١	٤	٠,٥٩-٠,٥٠
٥	٢	٣	٣	٢	٠,٦٩-٠,٦٠
٣	٢	١	٢	١	٠,٧٩-٠,٧٠
٦	٤	٥	٣	٢	٠,٨٩-٠,٨٠
٢٢	١٩	٩	٧	١	٠,٩٩-٠,٩٠
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## معاملات ارتباط الفقرات مع الدرجة الكلية

تميز الفقرات	الفقرات
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٠,٤٠	١١
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٠,٦٥	١٤
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## الفصل الثالث

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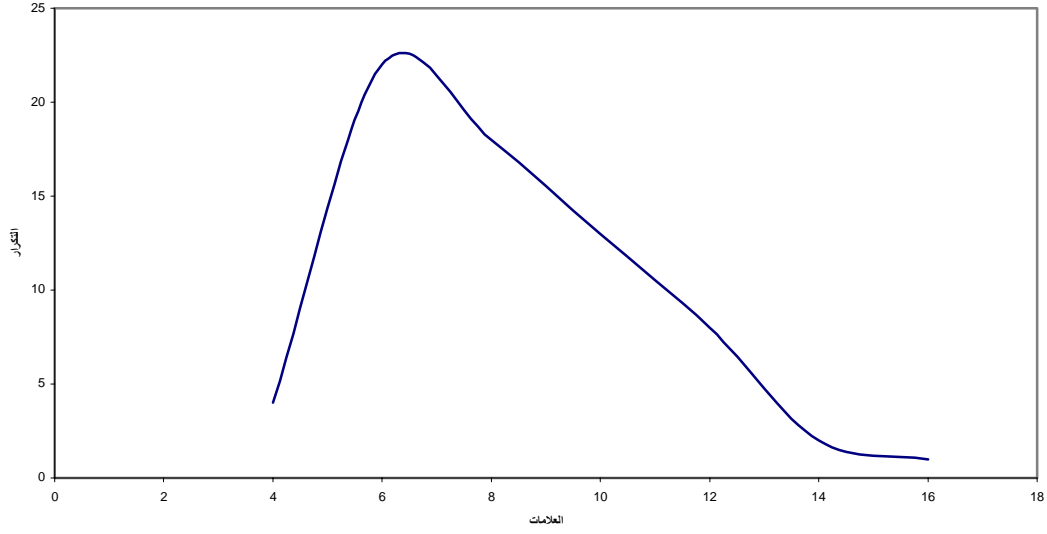
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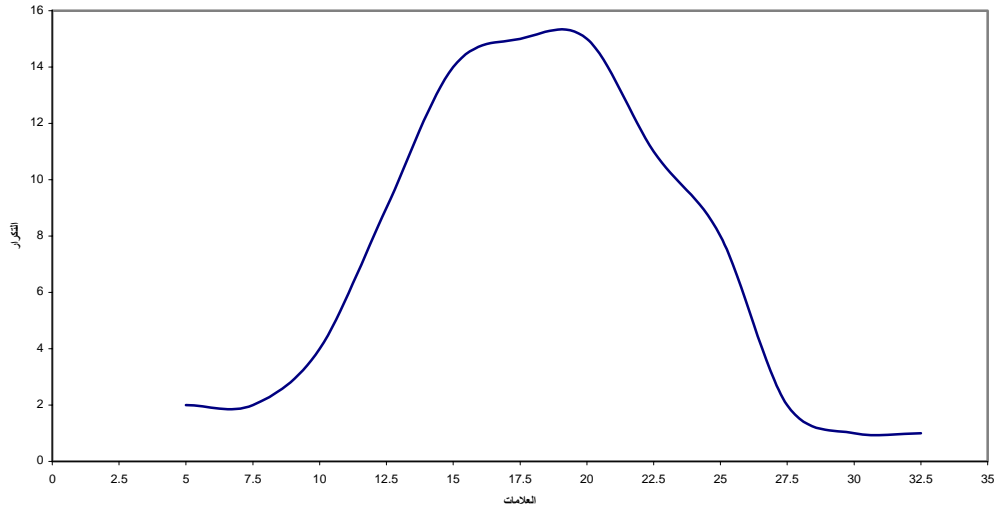

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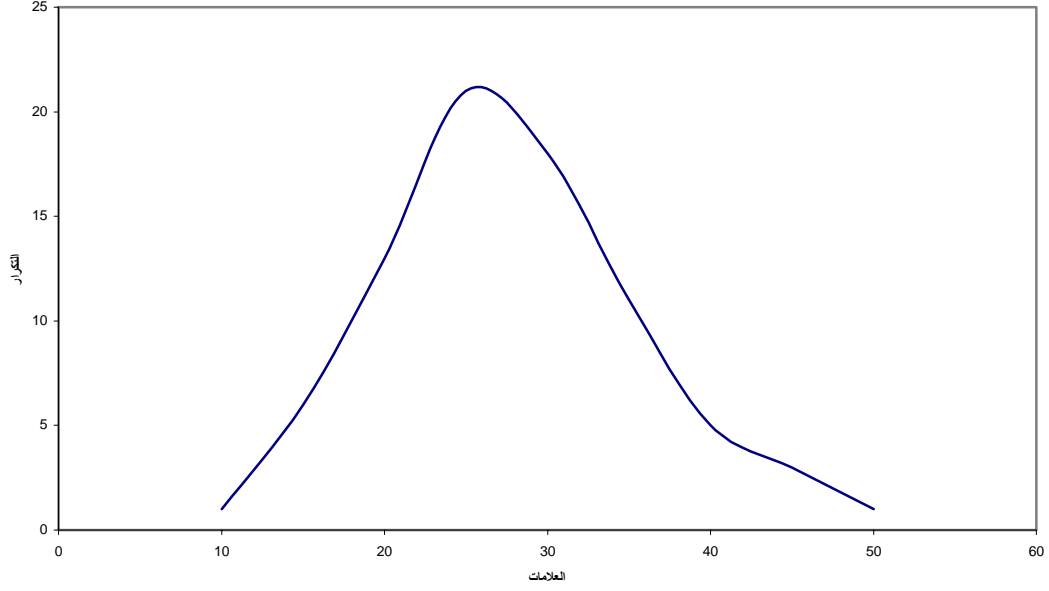
شكل رقم (١) توزيع علامات الفئة العمرية ٤ سنوات

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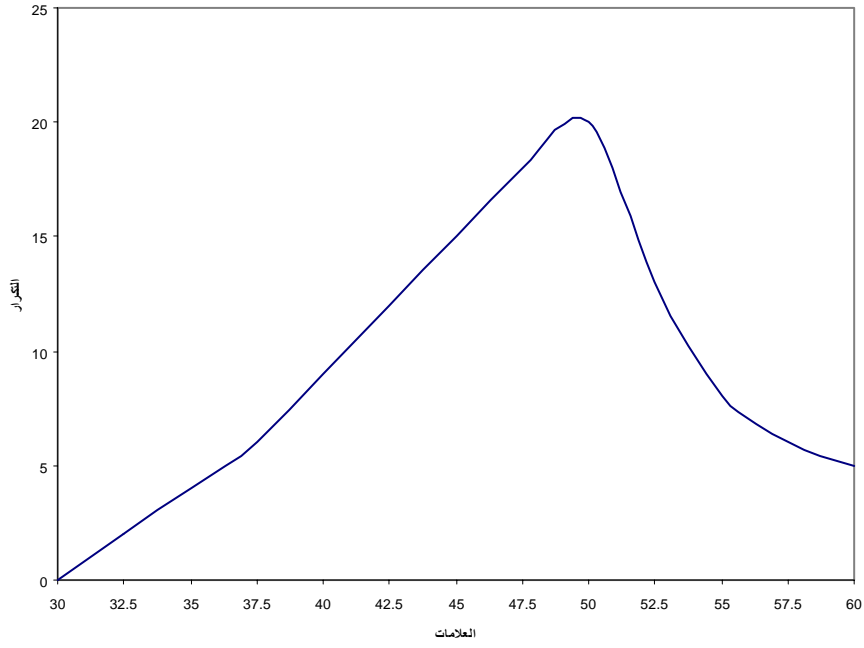
شكل رقم (٢) توزيع علامات الفئة العمرية ٥ سنوات

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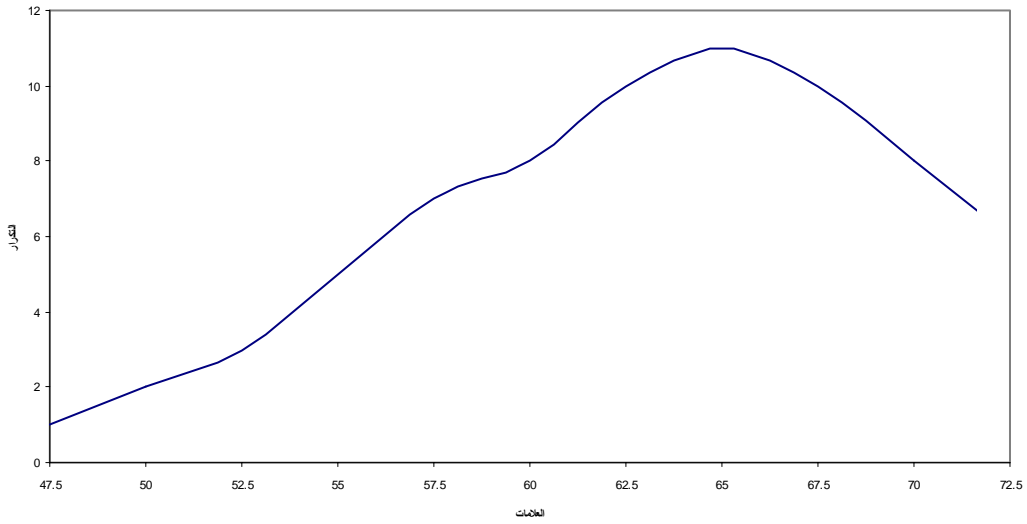
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الانحرافات المعيارية	المتوسط	العمر
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٦,٢	١٨	٥
٦,٤	٢٨	٦
٦,٥	٤٨	٧
٦,٦	٦٣	٨

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ثمان سنوات		سبع سنوات		ست سنوات		خمس سنوات		أربع سنوات		المهارات الرئيسي
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1	92	87	82	77	72	67	63	58	
2	95	90	85	80	75	69	65	60	56
3	97	92	87	82	77	72	68	63	58
4	100	95	90	85	80	75	70	65,	61
5	103	97	92	87	82	77	73	68	63
6	106	100	95	90	85	80	75	70	66
7	108	103	97	92	87	82	78	73	68
8	110	106	100	95	90	85	80	75	70
9	113	108	103	97	92	87	83	78	73
10	116	110	105	100	95	90	85	80	75
11	118	113	108	103	97	92	88	83	78
12	121	116	110	105	100	95	90	85	80
13	123	118	119	108	103	97	93	88	83
14	126	121	115	110	106	100	95	90	85
15	129	123	118	113	108	103	98	93	87
16	131	126	121	115	110	105	100	95	90
17	134	128	123	118	113	108	103	98	93

18	136	131	126	120	115	110	105	100	96
19	139	114	128	123	119	113	108	102	98
20	142	136	131	126	120	115	110	105	100
21	144	139	133	128	123	118	113	107	102
22		141	136	130	125	120	115	110	105
23		144	139	163	128	123	118	112	107
24			141	138	130	125	120	115	110
25			144	141	133	128	123	118	112
26			146	143	135	130	125	120	115
27				146	138	133	128	122	117
28					141	135	130	125	119
29					143	138	132	127	122
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34							145	140	135
35								143	137
36								145	139
37									142
38									144

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17	88	83	78	76	71	67	59	55	
18	90	85	81	78	74	69	62	58	
19	93	88	83	81	76	72	65	60	56
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21	98	93	88	86	81	76	69	65	60
22	100	95	90	88	83	79	72	67	63
23	102	98	92	90	86	81	74	70	65
24	105	100	95	93	88	83	76	72	67
25	107	102	98	95	90	86	79	74	70
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30	120	115	109	107	102	97	91	86	81
31	122	117	112	110	105	100	93	88	84
32	125	119	115	112	107	102	95	91	86
33	127	122	117	114	110	105	98	93	88

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35	132	127	122	119	114	109	102	97	93
36	134	129	124	122	117	119	108	100	95
37	137	132	127	124	119	114	107	102	97
38	139	134	129	126	122	117	109	105	100
39	142	137	131	129	124	119	112	107	102
40	144	193	134	131	126	121	114	109	105
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43			141	138	133	128	121	116	112
44			144	141	136	131	124	119	114
45			146	143	138	133	126	121	116
46				146	141	136	128	123	119
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33	83	79	74	70	66	62	58		
34	86	82	77	73	68	64	60	56	
35	88	84	79	75	71	66	62	58	
36	91	86	82	77	73	69	64	60	56
37	93	89	83	80	75	71	67	62	58
38	95	91	86	82	77	73	69	65	60
39	98	93	89	84	77	75	71	67	63
40	100	95	91	86	82	78	73	69	65
41	102	98	93	89	84	80	75	71	67
42	105	100	95	91	86	82	78	73	69
43	107	102	98	93	89	84	80	76	71
44	109	105	100	95	91	87	82	78	74
45	112	107	102	98	93	89	84	80	76
46	114	109	105	100	95	91	87	8	78
47	116	112	107	102	98	93	89	84	80
48	119	114	109	105	100	96	91	87	82

49	121	116	111	107	102	98	93	89	84
50	123	118	114	109	105	100	96	91	87
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54	132	128	123	118	114	109	104	100	96
55	135	130	125	120	116	111	107	102	98
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57	139	135	130	125	120	116	111	107	102
58	142	137	132	127	123	118	113	109	104
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49	80	76	72	68
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52	86	83	78	74
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54	91	87	83	78
55	93	89	85	81
56	96	91	87	83
57	98	93	89	85
58	100	96	91	87
59	102	98	94	89
60	104	100	96	91
61	107	101	98	94
62	109	104	100	96
63	111	107	102	98
64	113	108	104	100

65	115	111	106	102
66	118	113	107	104
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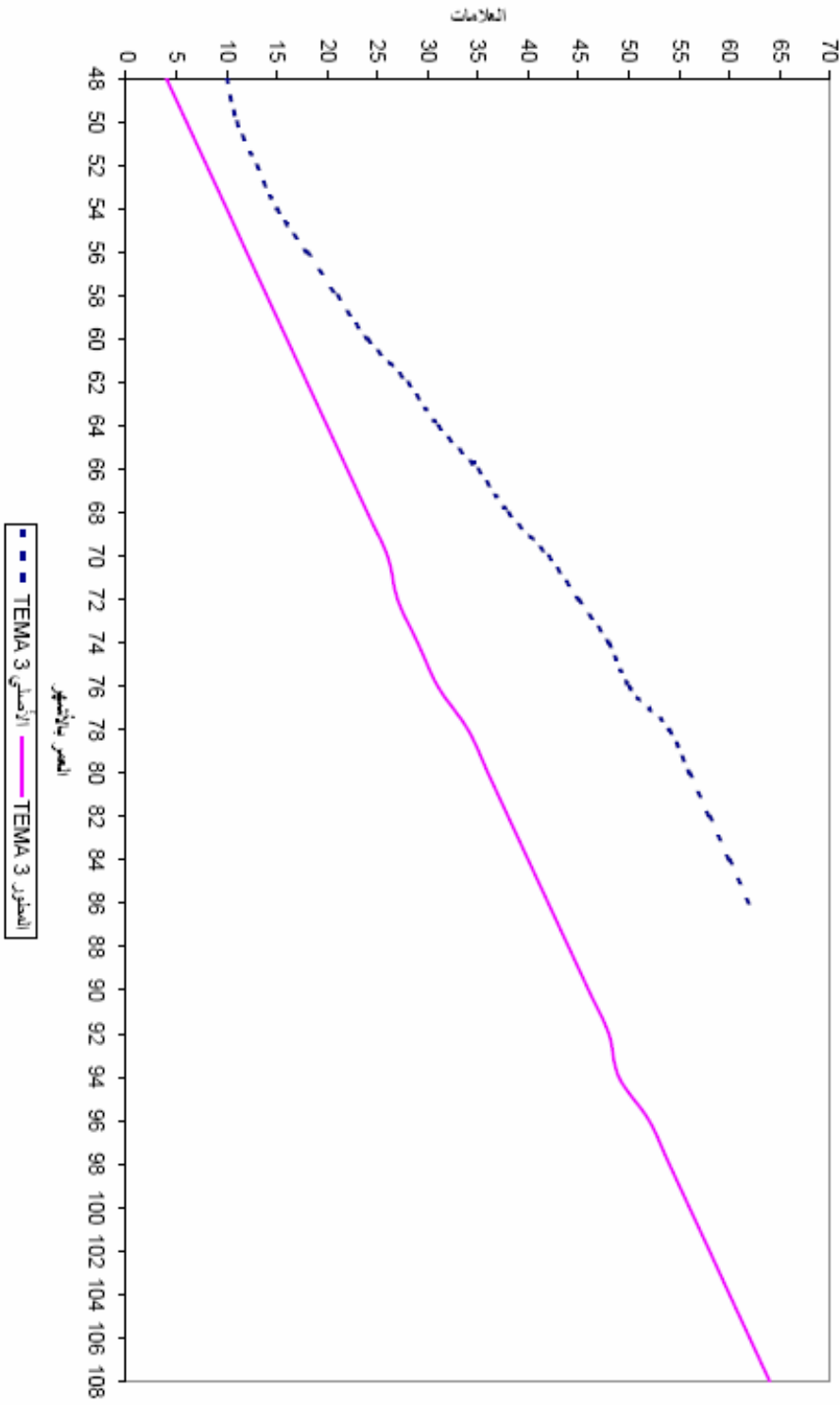
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# MATHEMATICAL ABILITY LEVEL OF JEDDAH CHILDREN AGED 4-8 YEARS OLD

By

Nada Ali Al-Garbuaa

Supervisor

Dr , Kaniel Mohmad Alian, Prof.

## Abstract

This study aimed to know the mathematics ability level for children from (4-8) year at Jaddah city. It also aimed to locate the strength and weariness points.

Derivation performance criteria to measure the mathematics abilities which characterized with truth indications and enough fixations.

Specifically, this study tried answering the following questions:

- A) What is the mathematic ability level of female children with category of (4-8) year at jaddah city?
- B) What are the mathematic criterions that measure mathematical abilities?

The Researcher developed (Test of Early Mathematic ability Edition) criterion with Saudian environment by translated, modified, Judged, experimented its paragraph from a small sample with clearness insurance of instructions.

To test directed at his first mould, and then applied individually. With spontaneous sample contains from (360) female student with category of (4-8) year with truth indications and fixation criterion.

Data analyzed and detected psychometric features for paragraph with what are it difficult and distinguishable truth indications and fixation criterion are detected by analyzing comparisons.

Fixation factor detected with corn back equation with value of 0.92. Performance criterion was detected too. The criterion duration was detected then transferred into contend degrees with 100 duration. The researcher recommended making other studies for bigger sample from suadian environment to reach the performance criterion which represented sample for all suidian community.