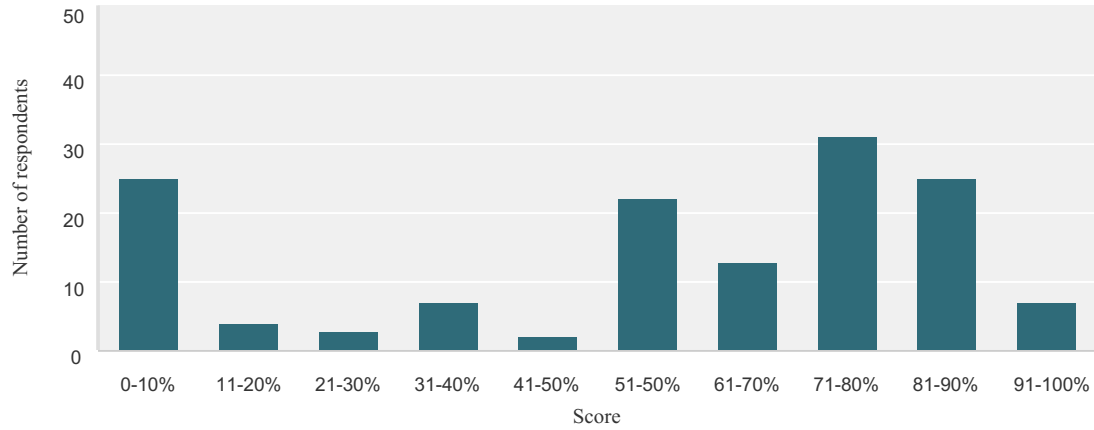


Quiz Summary

AVERAGE SCORE

68% • 17/25 PTS



Statistics

Lowest Score	Median	Highest Score
12%	72%	100%
Mean: 68%		
Standard Deviation: 19%		

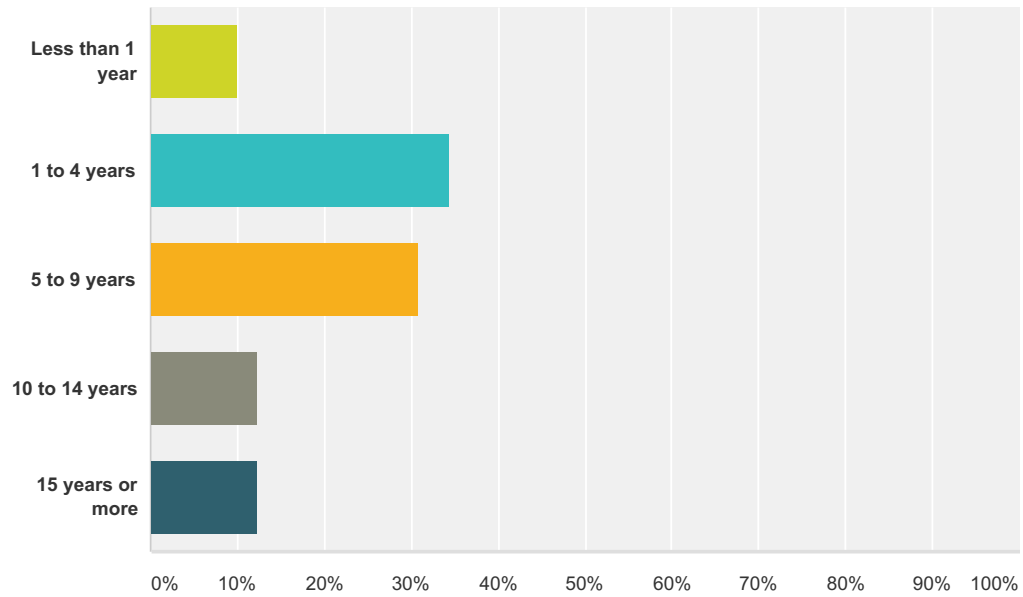
Question Ranking

Questions (25)	Difficulty	Average Score
Q6 Early childhood education and kindergarten programs should focus on teaching counting, sorting, patterning, and arithmetic.	1	32%
Q15 The belief that organized geometric and spatial reasoning instruction and activities are inappropriate for children in early childhood education and kindergarten programs is based on observation and study.	2	36%
Q23 Spatial reasoning ability at age three is a better predictor of general mathematics abilities at age five than either language at age 3 or even general mathematics skills at age 3.	3	41%
Q11 Research indicates that secondary (second major) focus of early childhood education and kindergarten programs should be spatial and geometric reasoning with measurement a distant third.	4	44%
Q10 Research indicates that number and operations should be the major (but not the only) focus of early childhood education and kindergarten programs.	5	46%
Q7 Geometry in early childhood education and kindergarten programs should focus on teaching children the names of shapes.	6	51%
Q26 By the time children reach Grade 7-8, almost all of them have reached the developmental stage where they intuitively understand the spatial structure of simple arrays no matter what their previous math experiences has been.	7	57%
Q16 Spatial sense and geometry receive the least amount of attention in your early years / kindergarten math program.	8	61%
Q25 The development of mathematics understanding in some children is hindered due to lack of attention to spatial skills.	9	64%
Q14 Research indicates that early childhood education and kindergarten programs should include a significant component of spatial and geometric reasoning instruction.	10	67%
Q20 Young children need spatial knowledge beyond what they typically know to solve problems in arithmetic and algebra.	11	69%

Q13 Organized spatial and geometric reasoning experiences are inappropriate for children in preschool and kindergarten programs.	12	72%
Q24 Geometry and spatial reasoning instruction and experiences in kindergarten classrooms do not play a role in the development of later non-routine problem-solving abilities.	13	80%
Q12 Children in early childhood education and kindergarten programs are capable of developing complex spatial thinking and spatial reasoning abilities such as visual-schematic representations of spatial orientation and spatial visualization.	14	83%
Q22 Geometry and spatial reasoning is an intellectual "key" that opens many doors for children to the development of other mathematics skills.	15	84%
Q8 Young children in early childhood education and kindergarten programs can learn number sense, operation, and arithmetic by working with shape and space.	16	87%
Q17 Spatial reasoning and thinking is a biologically determined cognitive trait which cannot be improved by math instruction in early childhood and kindergarten classrooms.	17	88%
Q21 The study of geometry and spatial reasoning and spatial thinking experiences at an early age contribute to children's development of numerical, spatial/geometrical, and other broad mathematics skills.	18	90%
Q9 Learning geometric and spatial reasoning skills is developmentally appropriate for children in early childhood education and kindergarten programs.	19	90%
Q29 Spatial thinking and reasoning involves the skills of perspective taking, visualizing, locating, orienting, dimension shifting, path-finding, sliding, rotating, reflecting, diagramming, modelling, symmetrizing, composing, decomposing, scaling, map-making, and designing.	20	93%
Q19 Spatial thinking and spatial reasoning contribute to general and overall mathematics success.	21	94%
Q18 Children's spatial reasoning abilities are malleable and can be improved by exposure to engaging spatial tasks starting in the early years and kindergarten math programs.	22	96%
Q28 Spatial thinking and spatial reasoning involves an individual's capacity to mentally compare, manipulate, and transform visual, non-linguistic information.	23	97%
Q27 Spatial thinking and spatial reasoning involves the locations of objects, their shapes, their relations to each other, and the paths they take as they move.	24	98%
Q30 If you had a question about spatial and geometric learning in your early years / kindergarten math program, which of the following resources would you be most likely to use to support your understanding?	25	100%

Q1 Which of the following best describes your kindergarten and/or early childhood permanent contract teaching experience?

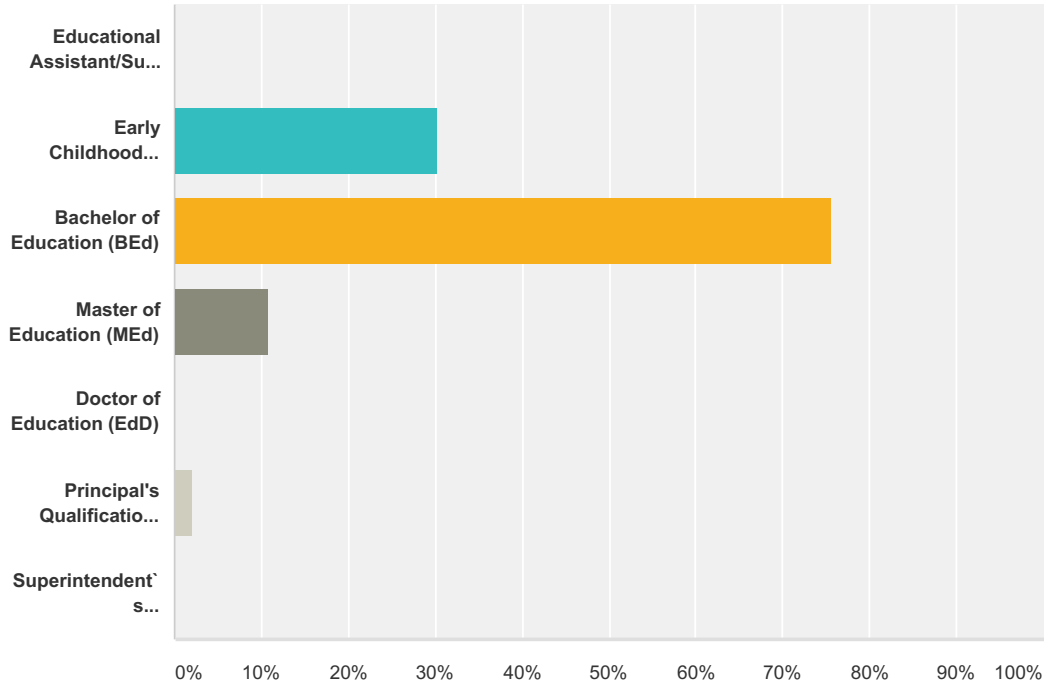
Answered: 139 Skipped: 0



Answer Choices	Responses
Less than 1 year	10.07% 14
1 to 4 years	34.53% 48
5 to 9 years	30.94% 43
10 to 14 years	12.23% 17
15 years or more	12.23% 17
Total	139

Q2 Which of the following best describes your current educational qualifications? (Check all that apply.)

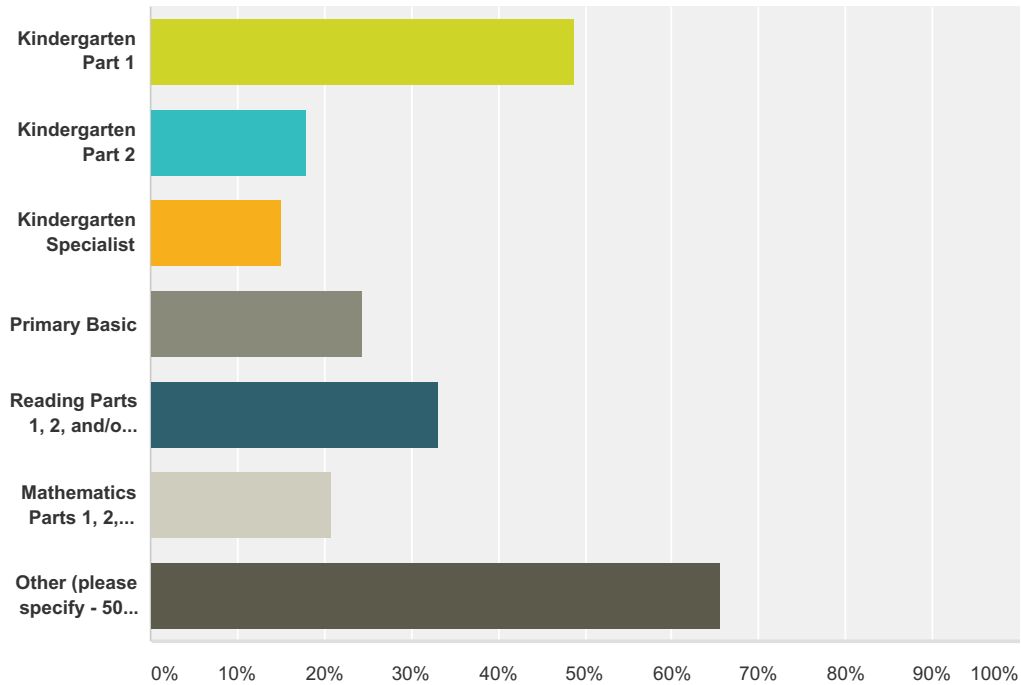
Answered: 139 Skipped: 0



Answer Choices	Responses
Educational Assistant/Support Diploma (EA)	0.00% 0
Early Childhood Education Diploma (ECE)	30.22% 42
Bachelor of Education (BEd)	75.54% 105
Master of Education (MEd)	10.79% 15
Doctor of Education (EdD)	0.00% 0
Principal's Qualifications (PQ)	2.16% 3
Superintendent's Qualifications	0.00% 0
Total Respondents: 139	

Q3 Which of the following Ontario College of Teachers' approved Additional Qualifications best describes your additional training? (Check all that apply.)

Answered: 139 Skipped: 0



Answer Choices	Responses
Kindergarten Part 1	48.92% 68
Kindergarten Part 2	17.99% 25
Kindergarten Specialist	15.11% 21
Primary Basic	24.46% 34
Reading Parts 1, 2, and/or Specialist	33.09% 46
Mathematics Parts 1, 2, and/or Specialist	20.86% 29
Other (please specify - 50 characters maximum)	65.47% 91
Total Respondents: 139	

#	Other (please specify - 50 characters maximum)	Date
1	FSL Specialist, Spec.Ed. Pt1	4/24/2017 8:20 AM
2	Library	4/20/2017 9:54 AM
3	Special Education Specialist, Intermediate Basic	4/17/2017 2:53 PM
4	Special Education 1 & 2	4/16/2017 9:17 PM
5	Spec Ed Part 1	4/16/2017 7:24 PM
6	None	4/16/2017 3:08 PM

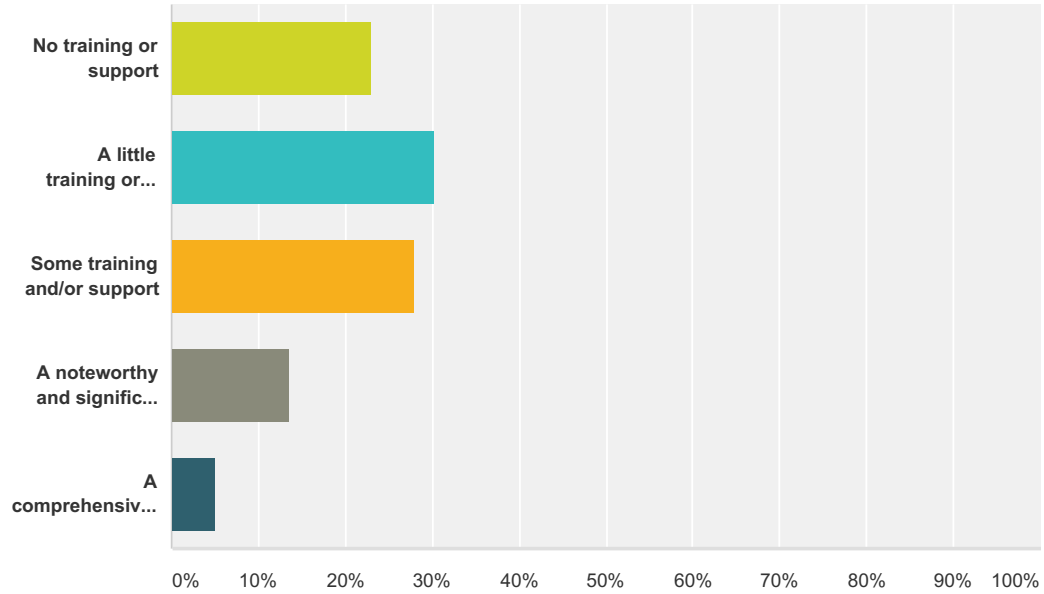
7	Spec ed part 1	4/16/2017 12:12 PM
8	none	4/16/2017 10:23 AM
9	Taking K2 beginning May 1	4/16/2017 7:27 AM
10	I am RECE	4/15/2017 11:06 PM
11	None	4/15/2017 9:13 PM
12	Special education specialist and Religious Ed specialist	4/15/2017 8:47 PM
13	esl 1, science 1 computers 1, spec ed 1 and 2, intermediate qualifications	4/15/2017 8:41 PM
14	French Specialist; Environmental Science Specialist; Visual Arts 1; ESL 1; Computers in the Classroom 1	4/15/2017 8:32 PM
15	Spec Ed. Part 1, librarian specialist	4/15/2017 7:22 AM
16	U of MB, B Ed (4 yrs), many electives in early childhood.	4/14/2017 4:03 PM
17	Special Education Specialist	4/14/2017 1:23 PM
18	Special ed specialist, PE Specialist	4/14/2017 11:28 AM
19	Spec Ed and Science	4/13/2017 11:50 PM
20	only because question requires an answer. please add a none option.	4/13/2017 10:00 PM
21	Resource Teaching Certificate	4/13/2017 8:29 PM
22	Spec Ed	4/13/2017 12:37 PM
23	spec ed specialist	4/13/2017 11:35 AM
24	Special Education Specialist	4/13/2017 9:53 AM
25	FSL 1,2,3 Spec Ed 1	4/13/2017 8:45 AM
26	Special-Ed Specialist	4/13/2017 8:13 AM
27	Special Education - Specialist	4/12/2017 9:58 PM
28	French Part 1, Integrated Arts	4/12/2017 9:35 PM
29	Spec ed 1 and 2	4/12/2017 9:26 PM
30	Primary part 1	4/12/2017 9:22 PM
31	Special Education Part 1	4/12/2017 7:42 PM
32	Spec Ed 1, int basic	4/12/2017 6:52 PM
33	Spec ed specialist	4/12/2017 6:04 PM
34	Special Education Specialist	4/12/2017 5:37 PM
35	Tech, spec ed 1-2, religion	4/12/2017 2:19 AM
36	French part 1 Special Ed Part 1	4/11/2017 7:30 PM
37	Spec ed pt 1	4/11/2017 7:18 PM
38	Special Ed Part 1	4/11/2017 2:12 PM
39	Special Education Part 1, Librarianship Part 1	4/11/2017 1:51 PM
40	Spec ed specialist, primary specialist	4/11/2017 10:42 AM
41	None. ECE	4/11/2017 8:46 AM
42	I am unable to take these courses as I am an RECE	4/11/2017 6:47 AM
43	Spec Ed Specialist, Technology Specialist, intermediate AQ	4/11/2017 6:44 AM
44	Spec Ed Specialist	4/11/2017 6:39 AM
45	Special education specialist, primary specialist	4/11/2017 5:52 AM
46	Special Ed Part 1 and 2	4/11/2017 3:59 AM
47	Spec Ed Parts 1, 2	4/11/2017 2:40 AM

48	Primary/ junior	4/10/2017 10:13 PM
49	special education specialist	4/10/2017 9:52 PM
50	None	4/10/2017 9:35 PM
51	Special Education Part 1	4/10/2017 9:12 PM
52	Special Education part 1, Intermediate English Qulaifications	4/10/2017 9:04 PM
53	Special Education	4/10/2017 9:01 PM
54	Primary	4/10/2017 8:29 PM
55	Guidance Specialist	4/10/2017 8:29 PM
56	Primary Part 2, Spec Ed Part 1	4/10/2017 8:28 PM
57	Senior social science ABQ	4/10/2017 8:26 PM
58	N/A	4/10/2017 8:24 PM
59	Outdoor education Mentor	4/10/2017 8:17 PM
60	None	4/10/2017 8:10 PM
61	None	4/10/2017 7:43 PM
62	Music Specialist	4/10/2017 6:43 PM
63	English as a second language specialist	4/10/2017 6:41 PM
64	Special education part 1	4/10/2017 6:39 PM
65	ECE	4/10/2017 6:25 PM
66	Spec Ed Pt 1, IICT Pt 1	4/10/2017 6:22 PM
67	Spec ed part 1	4/10/2017 6:20 PM
68	Fsl specialist spec ed specialist	4/10/2017 6:06 PM
69	Special Ed part 1	4/10/2017 6:02 PM
70	No AQ courses	4/10/2017 5:53 PM
71	Computers in the classroom	4/10/2017 5:45 PM
72	Special Education Specialist	4/10/2017 5:33 PM
73	special education part 1 and part 2	4/10/2017 3:12 PM
74	Special Education Part One	4/10/2017 1:05 PM
75	Spec. Ed Part 1	4/10/2017 10:08 AM
76	ESL Part 1, Library Part 1	4/10/2017 9:22 AM
77	None	4/10/2017 7:34 AM
78	Bachelor of Early Childhood Studies (pending)	4/10/2017 7:30 AM
79	esl part 1	4/10/2017 7:26 AM
80	Spec ed part 1	4/10/2017 7:22 AM
81	Deaf Specialist, Special Ed.	4/10/2017 7:19 AM
82	ESL part one	4/10/2017 7:11 AM
83	Na	4/10/2017 7:11 AM
84	ELL1, SPECED1	4/10/2017 7:10 AM
85	None	4/10/2017 7:09 AM
86	Special education 1,2,3	4/10/2017 7:01 AM
87	Special Ed1, FSL1	4/10/2017 7:01 AM
88	Spec Ed Specialist	4/10/2017 6:59 AM

89	None	4/10/2017 6:53 AM
90	Spec Ed specialist	4/10/2017 6:46 AM
91	None	4/9/2017 10:13 PM

Q4 How much additional training and/or support did you receive from your employer in the last year on the subject of teaching of mathematics to young children.

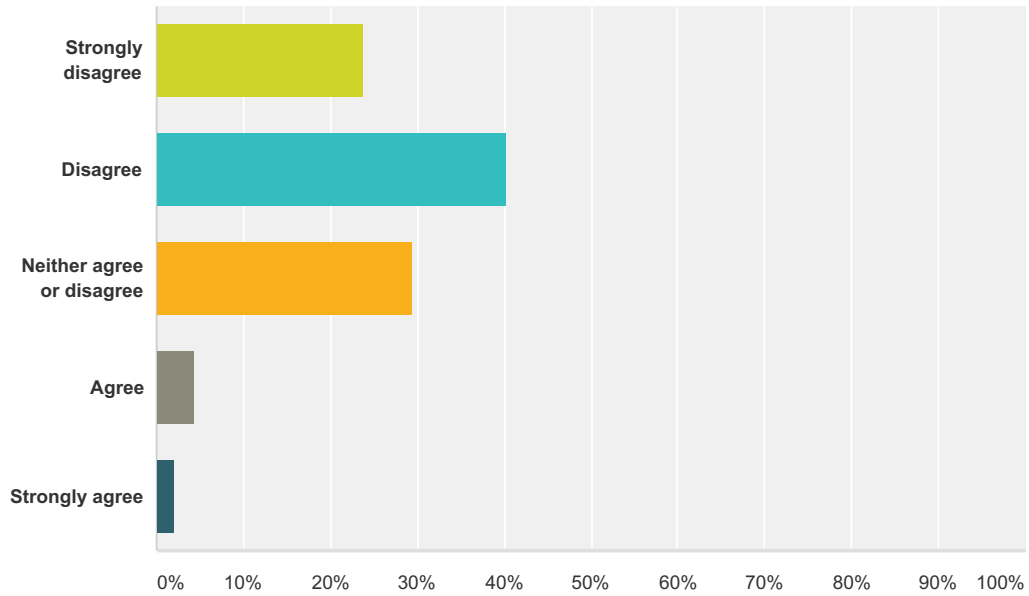
Answered: 139 Skipped: 0



Answer Choices	Responses
No training or support	23.02% 32
A little training or support	30.22% 42
Some training and/or support	28.06% 39
A noteworthy and significant amount of training and/or support.	13.67% 19
A comprehensive and considerable amount of training and support.	5.04% 7
Total	139

Q5 My supervisor/ administrator/ principal is more interested in student literacy achievement than mathematics achievement.

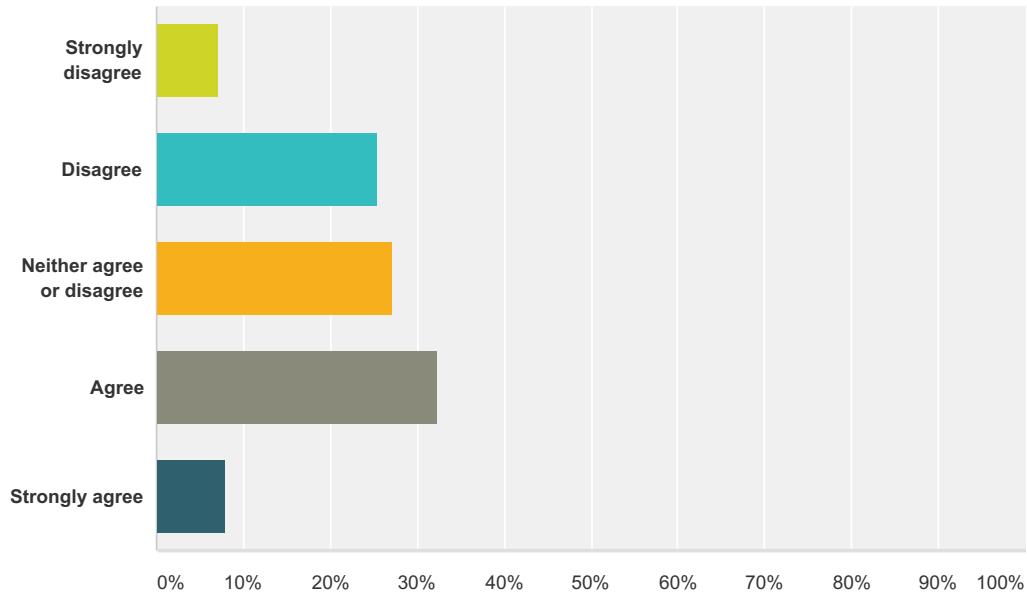
Answered: 139 Skipped: 0



Answer Choices	Responses	
Strongly disagree	23.74%	33
Disagree	40.29%	56
Neither agree or disagree	29.50%	41
Agree	4.32%	6
Strongly agree	2.16%	3
Total		139

Q6 Early childhood education and kindergarten programs should focus on teaching counting, sorting, patterning, and arithmetic.

Answered: 114 Skipped: 25

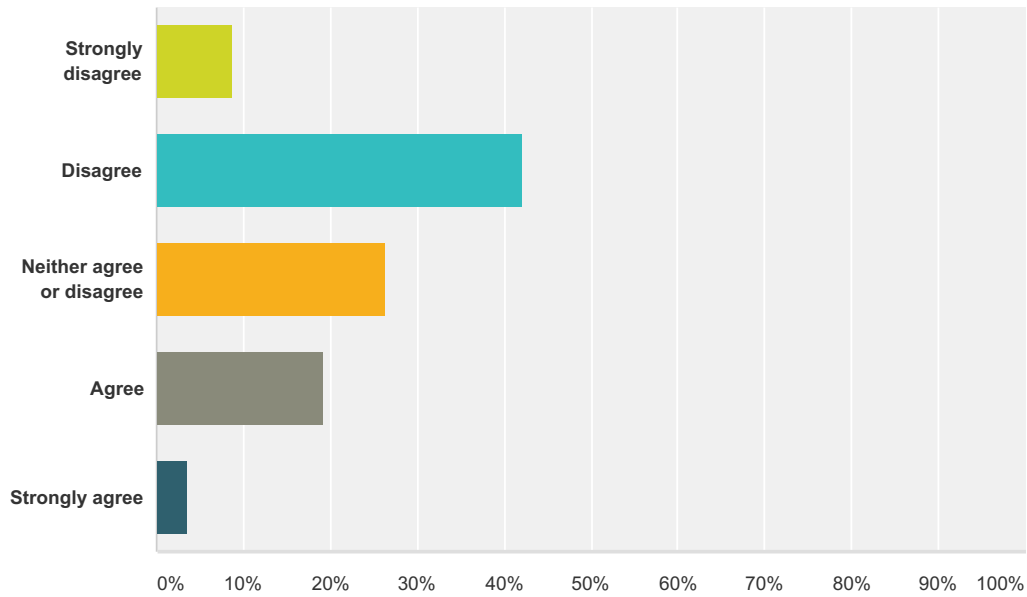


Quiz Statistics			
Percent Correct 27%	Average Score 0.3/1.0 (32%)	Standard Deviation 0.47	Difficulty 1/25

Answer Choices	Score	Responses
✓ Strongly disagree	1/1	7.02% 8
✓ Disagree	1/1	25.44% 29
Neither agree or disagree	0/1	27.19% 31
Agree	0/1	32.46% 37
Strongly agree	0/1	7.89% 9
Total		114

Q7 Geometry in early childhood education and kindergarten programs should focus on teaching children the names of shapes.

Answered: 114 Skipped: 25

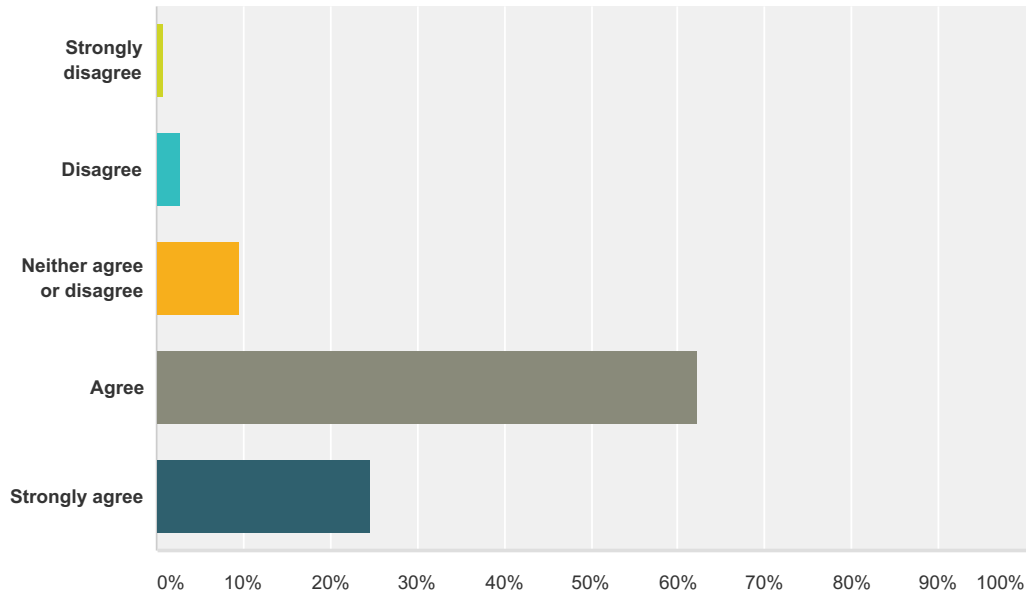


Quiz Statistics			
Percent Correct 42%	Average Score 0.5/1.0 (51%)	Standard Deviation 0.50	Difficulty 6/25

Answer Choices	Score	Responses
✓ Strongly disagree	1/1	8.77% 10
✓ Disagree	1/1	42.11% 48
Neither agree or disagree	0/1	26.32% 30
Agree	0/1	19.30% 22
Strongly agree	0/1	3.51% 4
Total		114

Q8 Young children in early childhood education and kindergarten programs can learn number sense, operation, and arithmetic by working with shape and space.

Answered: 114 Skipped: 25



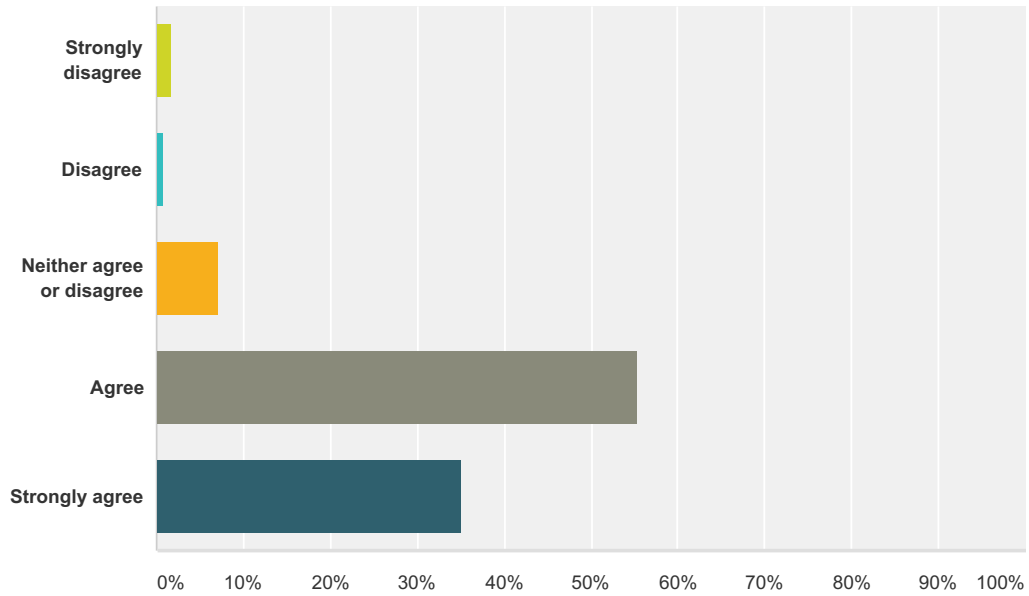
Quiz Statistics

Percent Correct 71%	Average Score 0.9/1.0 (87%)	Standard Deviation 0.34	Difficulty 16/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.88% 1
Disagree	0/1	2.63% 3
Neither agree or disagree	0/1	9.65% 11
✓ Agree	1/1	62.28% 71
✓ Strongly agree	1/1	24.56% 28
Total		114

Q9 Learning geometric and spatial reasoning skills is developmentally appropriate for children in early childhood education and kindergarten programs.

Answered: 114 Skipped: 25



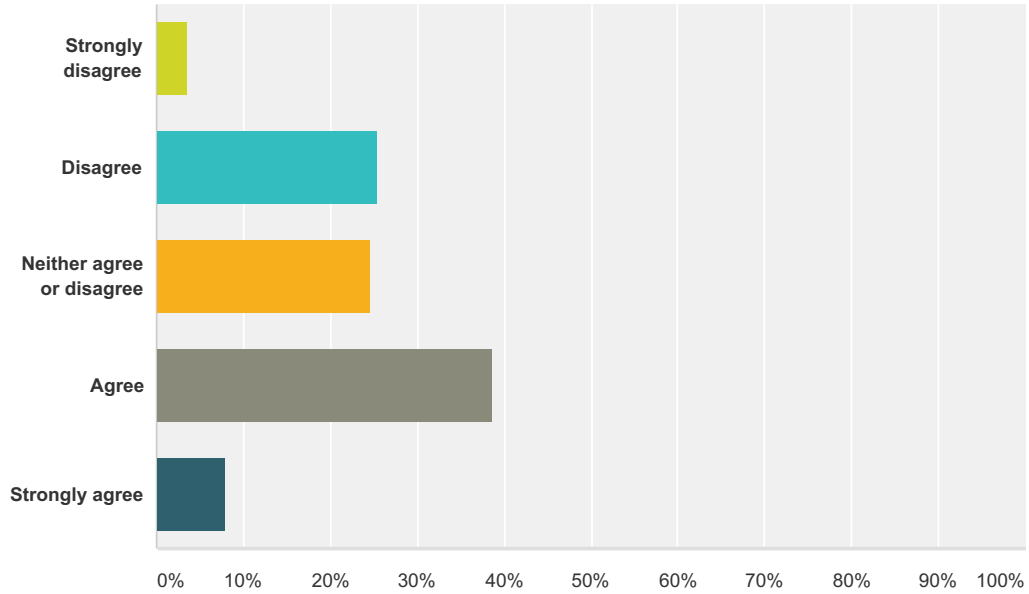
Quiz Statistics

Percent Correct 74%	Average Score 0.9/1.0 (90%)	Standard Deviation 0.30	Difficulty 19/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	1.75% 2
Disagree	0/1	0.88% 1
Neither agree or disagree	0/1	7.02% 8
✓ Agree	1/1	55.26% 63
✓ Strongly agree	1/1	35.09% 40
Total		114

Q10 Research indicates that number and operations should be the major (but not the only) focus of early childhood education and kindergarten programs.

Answered: 114 Skipped: 25

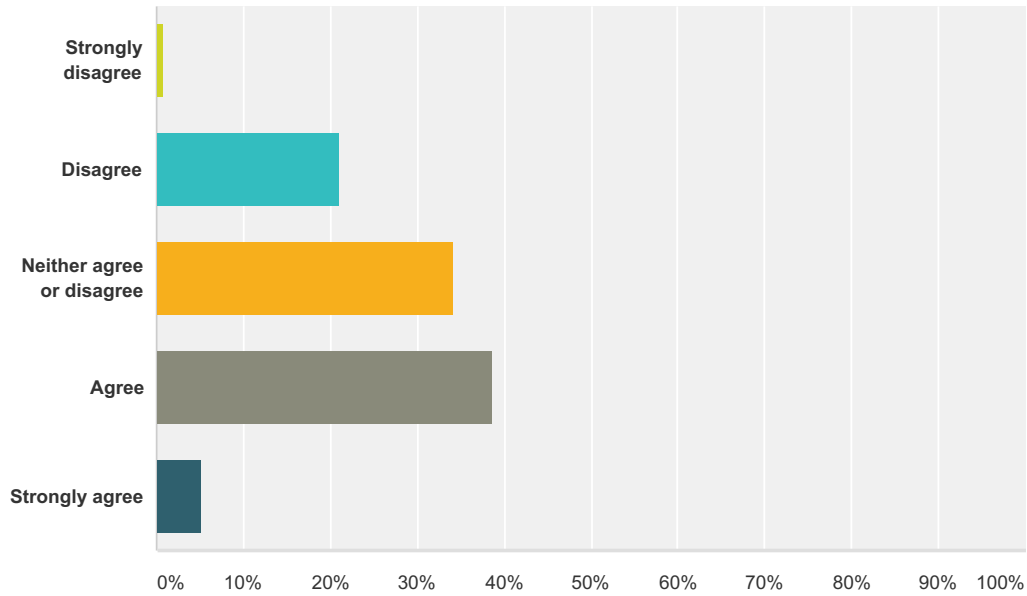


Quiz Statistics			
Percent Correct 38%	Average Score 0.5/1.0 (46%)	Standard Deviation 0.50	Difficulty 5/25

Answer Choices	Score	Responses
Strongly disagree	0/1	3.51% 4
Disagree	0/1	25.44% 29
Neither agree or disagree	0/1	24.56% 28
✓ Agree	1/1	38.60% 44
✓ Strongly agree	1/1	7.89% 9
Total		114

Q11 Research indicates that secondary (second major) focus of early childhood education and kindergarten programs should be spatial and geometric reasoning with measurement a distant third.

Answered: 114 Skipped: 25



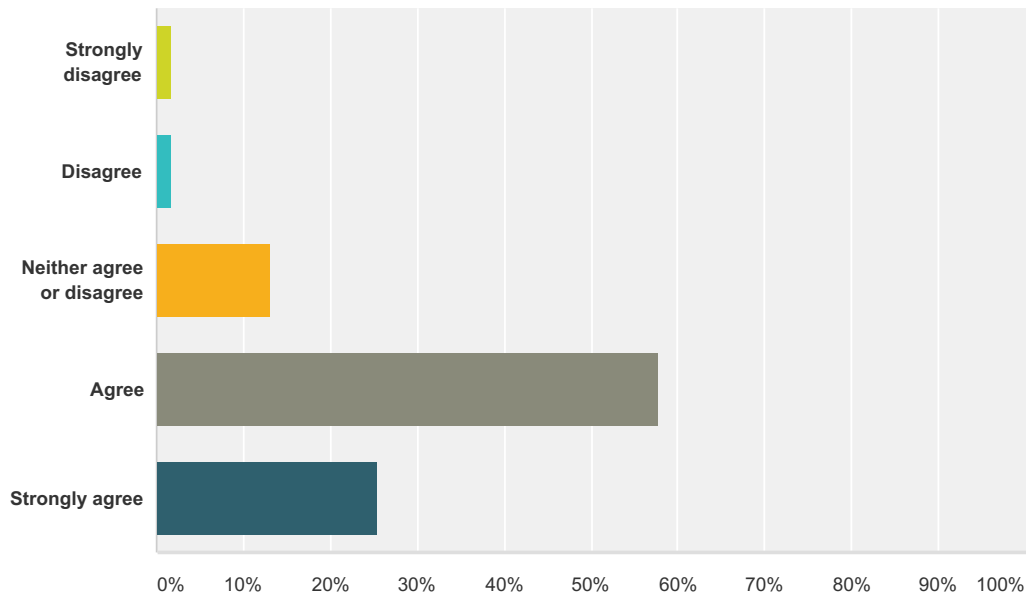
Quiz Statistics

Percent Correct 36%	Average Score 0.4/1.0 (44%)	Standard Deviation 0.50	Difficulty 4/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.88% 1
Disagree	0/1	21.05% 24
Neither agree or disagree	0/1	34.21% 39
✓ Agree	1/1	38.60% 44
✓ Strongly agree	1/1	5.26% 6
Total		114

Q12 Children in early childhood education and kindergarten programs are capable of developing complex spatial thinking and spatial reasoning abilities such as visual-schematic representations of spatial orientation and spatial visualization.

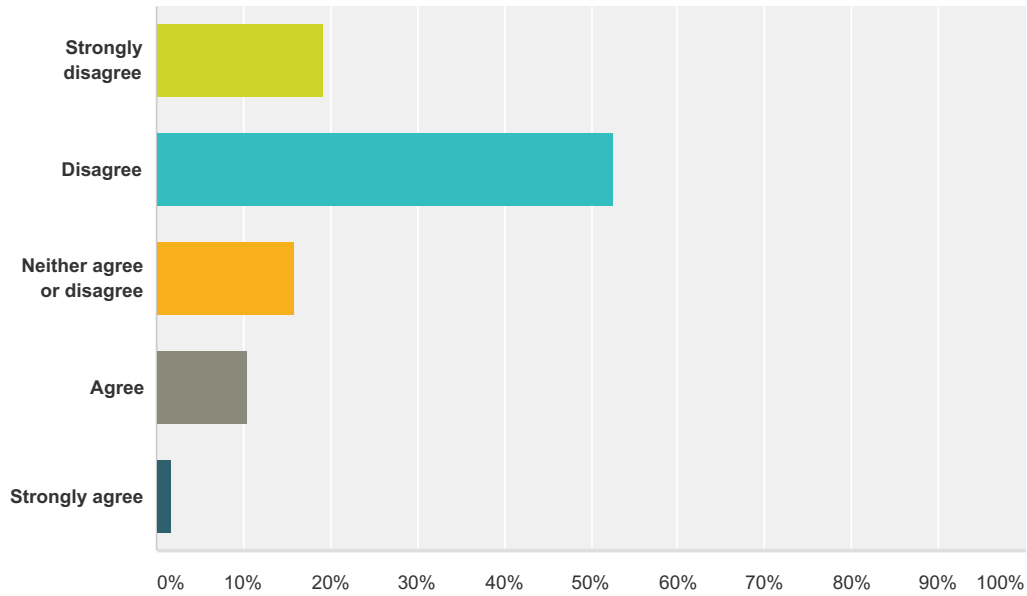
Answered: 114 Skipped: 25



Quiz Statistics			
Percent Correct 68%	Average Score 0.8/1.0 (83%)	Standard Deviation 0.37	Difficulty 14/25
Answer Choices	Score	Responses	
Strongly disagree	0/1	1.75%	2
Disagree	0/1	1.75%	2
Neither agree or disagree	0/1	13.16%	15
✓ Agree	1/1	57.89%	66
✓ Strongly agree	1/1	25.44%	29
Total			114

Q13 Organized spatial and geometric reasoning experiences are inappropriate for children in preschool and kindergarten programs.

Answered: 114 Skipped: 25



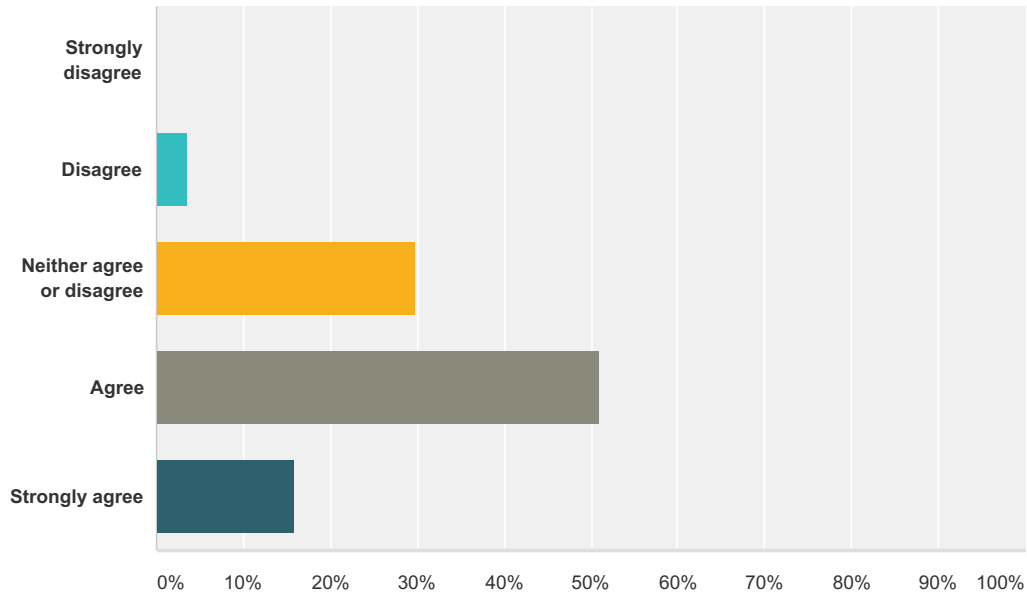
Quiz Statistics

Percent Correct 59%	Average Score 0.7/1.0 (72%)	Standard Deviation 0.45	Difficulty 12/25
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Answer Choices	Score	Responses
✓ Strongly disagree	1/1	19.30% 22
✓ Disagree	1/1	52.63% 60
Neither agree or disagree	0/1	15.79% 18
Agree	0/1	10.53% 12
Strongly agree	0/1	1.75% 2
Total		114

Q14 Research indicates that early childhood education and kindergarten programs should include a significant component of spatial and geometric reasoning instruction.

Answered: 114 Skipped: 25



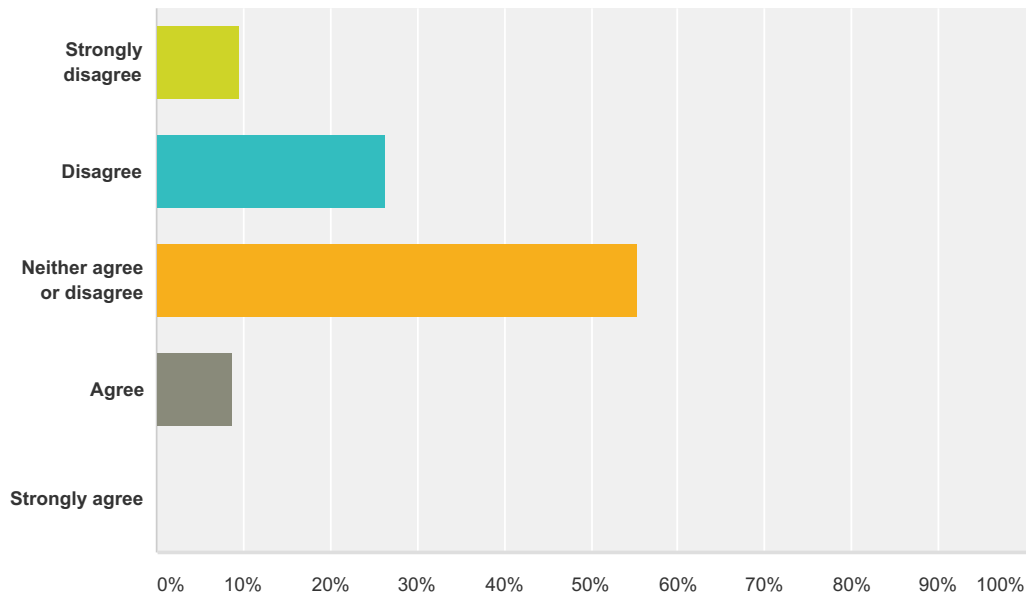
Quiz Statistics

Percent Correct 55%	Average Score 0.7/1.0 (67%)	Standard Deviation 0.47	Difficulty 10/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.00% 0
Disagree	0/1	3.51% 4
Neither agree or disagree	0/1	29.82% 34
✓ Agree	1/1	50.88% 58
✓ Strongly agree	1/1	15.79% 18
Total		114

Q15 The belief that organized geometric and spatial reasoning instruction and activities are inappropriate for children in early childhood education and kindergarten programs is based on observation and study.

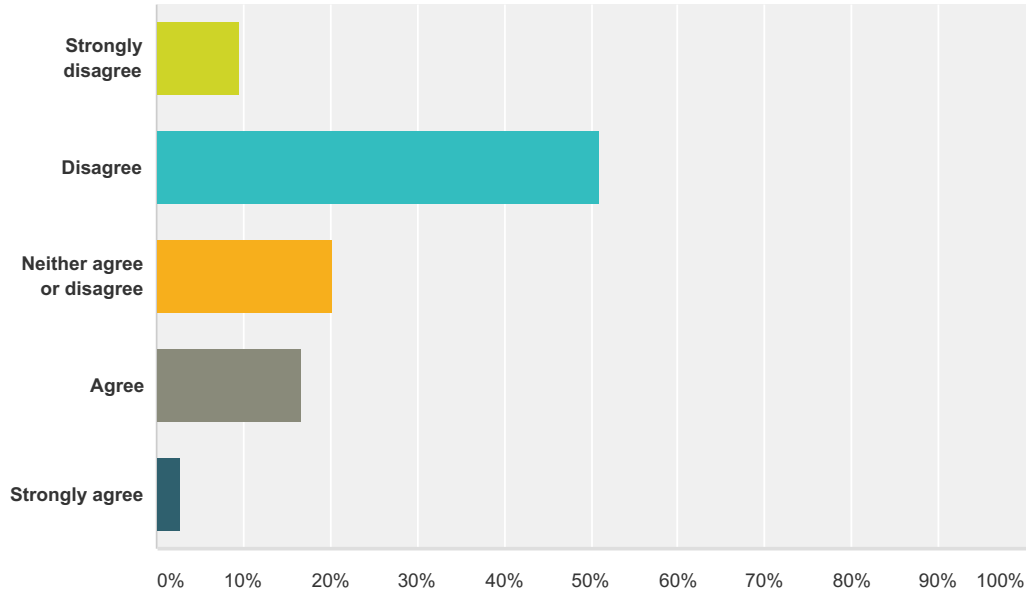
Answered: 114 Skipped: 25



Quiz Statistics			
Percent Correct 29%	Average Score 0.4/1.0 (36%)	Standard Deviation 0.48	Difficulty 2/25
Answer Choices	Score	Responses	
✔ Strongly disagree	1/1	9.65%	11
✔ Disagree	1/1	26.32%	30
Neither agree or disagree	0/1	55.26%	63
Agree	0/1	8.77%	10
Strongly agree	0/1	0.00%	0
Total			114

Q16 Spatial sense and geometry receive the least amount of attention in your early years / kindergarten math program.

Answered: 114 Skipped: 25

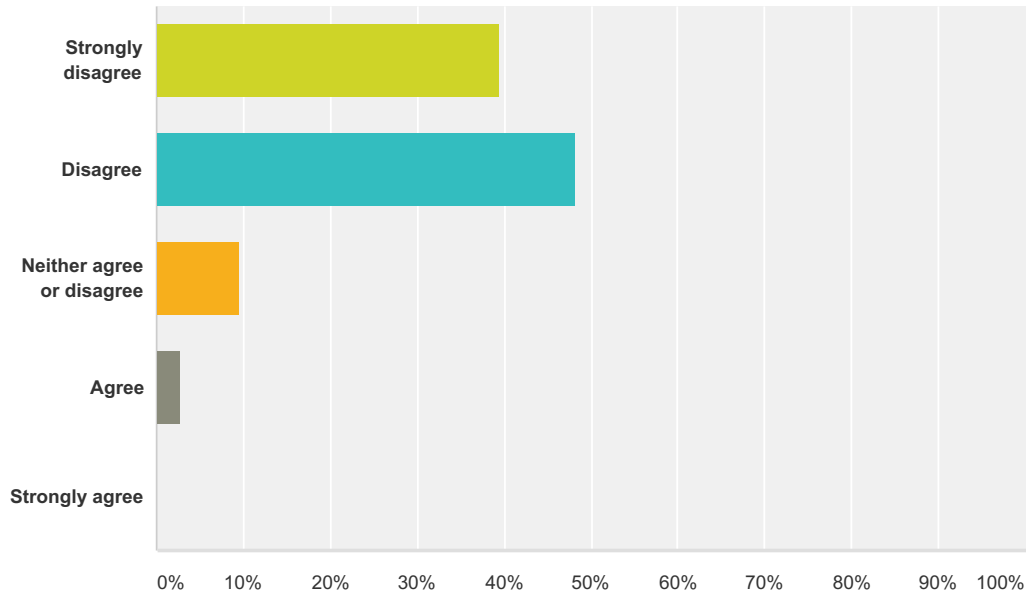


Quiz Statistics			
Percent Correct 50%	Average Score 0.6/1.0 (61%)	Standard Deviation 0.49	Difficulty 8/25

Answer Choices	Score	Responses
✓ Strongly disagree	1/1	9.65% 11
✓ Disagree	1/1	50.88% 58
Neither agree or disagree	0/1	20.18% 23
Agree	0/1	16.67% 19
Strongly agree	0/1	2.63% 3
Total		114

Q17 Spatial reasoning and thinking is a biologically determined cognitive trait which cannot be improved by math instruction in early childhood and kindergarten classrooms.

Answered: 114 Skipped: 25



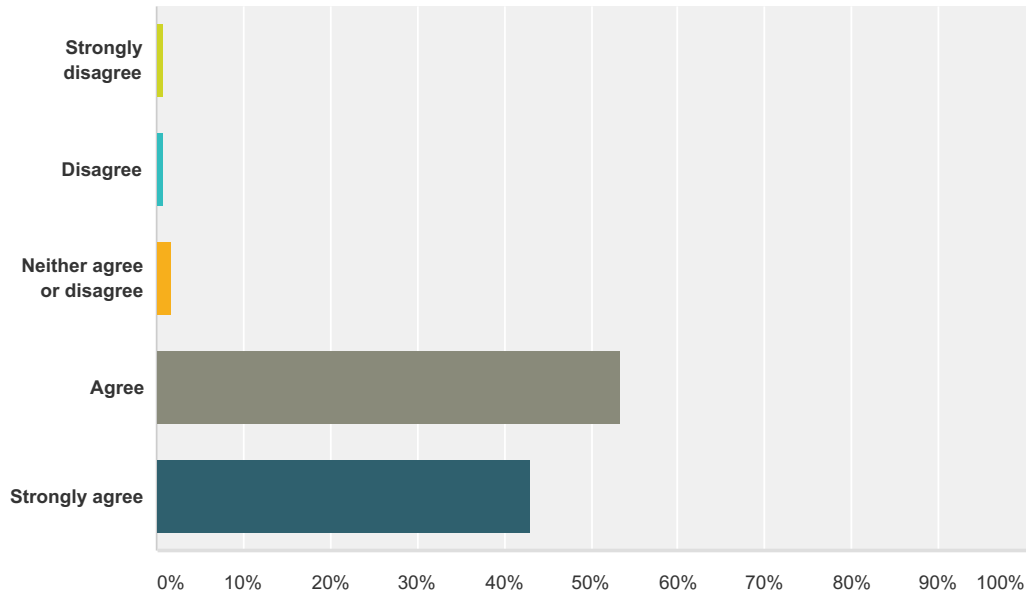
Quiz Statistics

Percent Correct 72%	Average Score 0.9/1.0 (88%)	Standard Deviation 0.33	Difficulty 17/25
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Answer Choices	Score	Responses
✔ Strongly disagree	1/1	39.47% 45
✔ Disagree	1/1	48.25% 55
Neither agree or disagree	0/1	9.65% 11
Agree	0/1	2.63% 3
Strongly agree	0/1	0.00% 0
Total		114

Q18 Children's spatial reasoning abilities are malleable and can be improved by exposure to engaging spatial tasks starting in the early years and kindergarten math programs.

Answered: 114 Skipped: 25



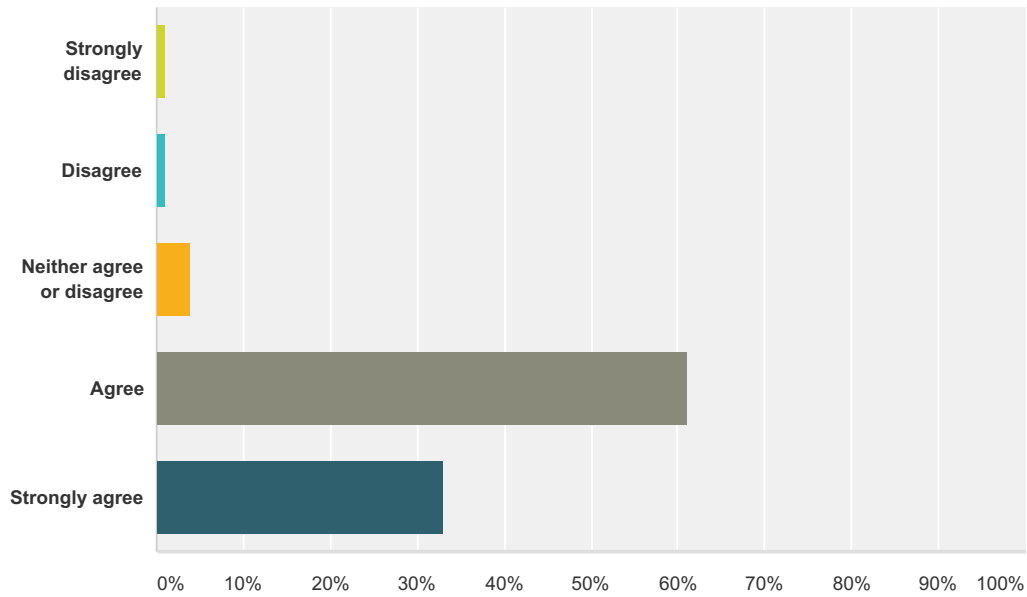
Quiz Statistics

Percent Correct 79%	Average Score 1.0/1.0 (96%)	Standard Deviation 0.18	Difficulty 22/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.88% 1
Disagree	0/1	0.88% 1
Neither agree or disagree	0/1	1.75% 2
✓ Agree	1/1	53.51% 61
✓ Strongly agree	1/1	42.98% 49
Total		114

Q19 Spatial thinking and spatial reasoning contribute to general and overall mathematics success.

Answered: 103 Skipped: 36

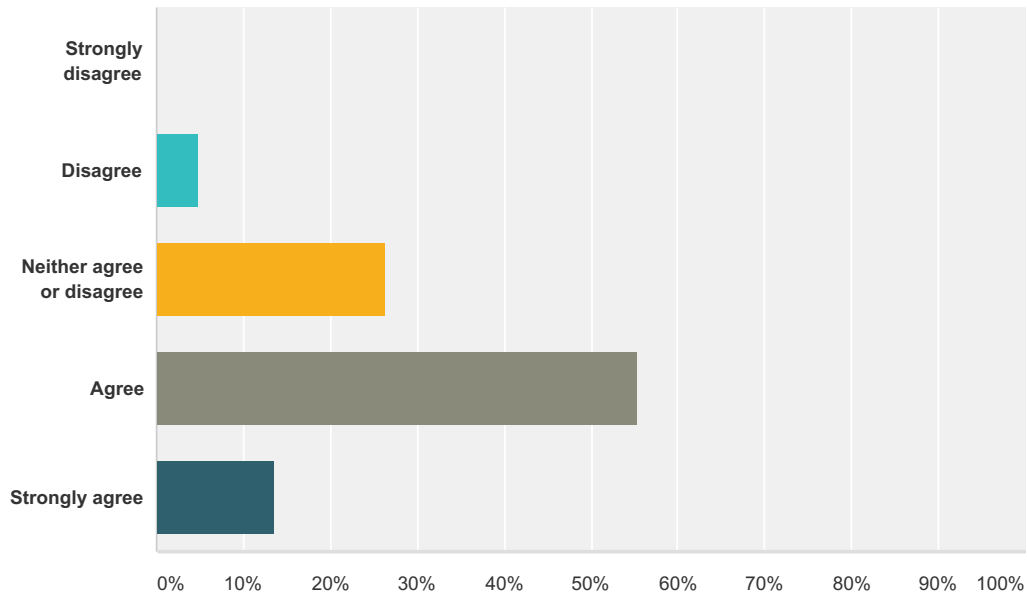


Quiz Statistics			
Percent Correct 70%	Average Score 0.9/1.0 (94%)	Standard Deviation 0.24	Difficulty 21/25

Answer Choices	Score	Responses
Strongly disagree	0/1	0.97% 1
Disagree	0/1	0.97% 1
Neither agree or disagree	0/1	3.88% 4
✓ Agree	1/1	61.17% 63
✓ Strongly agree	1/1	33.01% 34
Total		103

Q20 Young children need spatial knowledge beyond what they typically know to solve problems in arithmetic and algebra.

Answered: 103 Skipped: 36

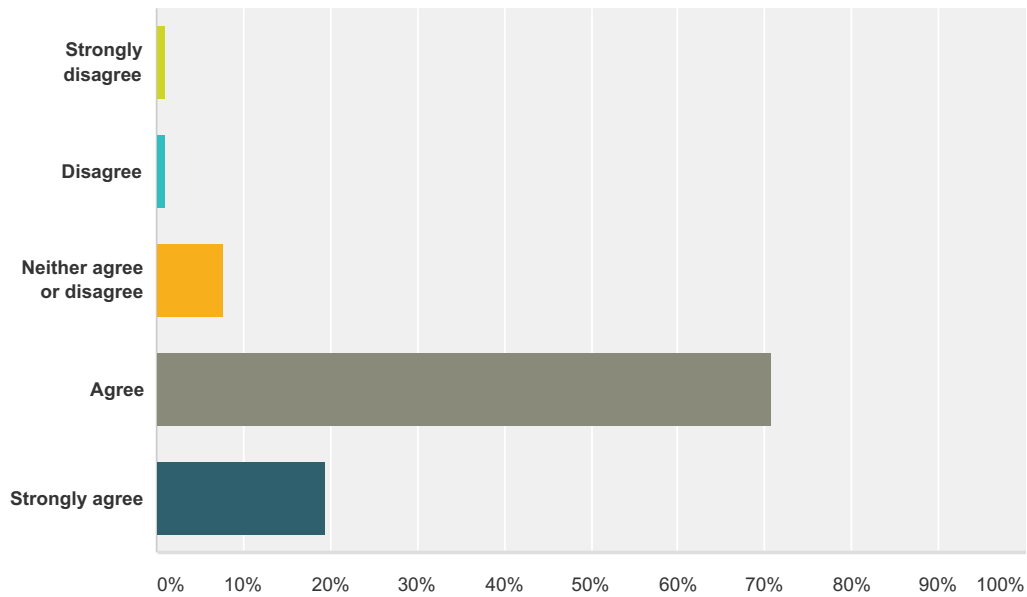


Quiz Statistics			
Percent Correct 51%	Average Score 0.7/1.0 (69%)	Standard Deviation 0.47	Difficulty 11/25

Answer Choices	Score	Responses
Strongly disagree	0/1	0.00% 0
Disagree	0/1	4.85% 5
Neither agree or disagree	0/1	26.21% 27
✓ Agree	1/1	55.34% 57
✓ Strongly agree	1/1	13.59% 14
Total		103

Q21 The study of geometry and spatial reasoning and spatial thinking experiences at an early age contribute to children's development of numerical, spatial/geometrical, and other broad mathematics skills.

Answered: 103 Skipped: 36



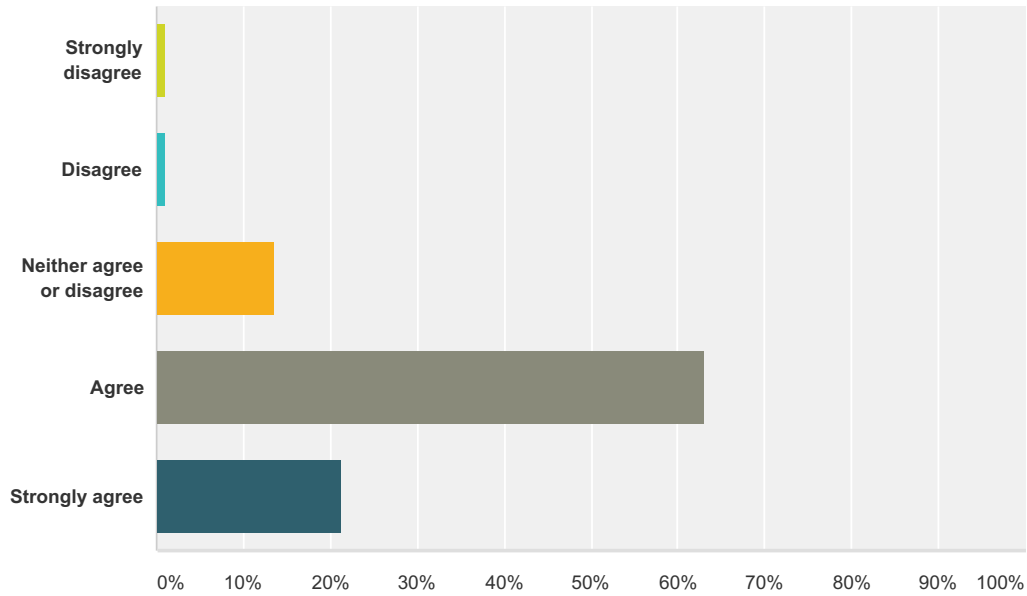
Quiz Statistics

Percent Correct 67%	Average Score 0.9/1.0 (90%)	Standard Deviation 0.30	Difficulty 18/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.97% 1
Disagree	0/1	0.97% 1
Neither agree or disagree	0/1	7.77% 8
✓ Agree	1/1	70.87% 73
✓ Strongly agree	1/1	19.42% 20
Total		103

Q22 Geometry and spatial reasoning is an intellectual "key" that opens many doors for children to the development of other mathematics skills.

Answered: 103 Skipped: 36



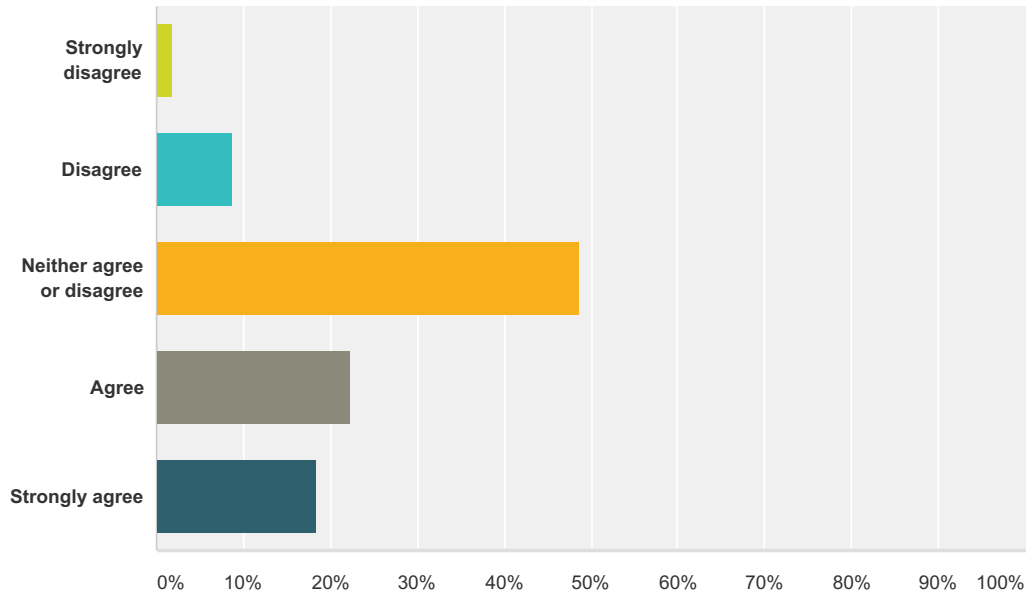
Quiz Statistics

Percent Correct 63%	Average Score 0.8/1.0 (84%)	Standard Deviation 0.36	Difficulty 15/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.97% 1
Disagree	0/1	0.97% 1
Neither agree or disagree	0/1	13.59% 14
✓ Agree	1/1	63.11% 65
✓ Strongly agree	1/1	21.36% 22
Total		103

Q23 Spatial reasoning ability at age three is a better predictor of general mathematics abilities at age five than either language at age 3 or even general mathematics skills at age 3.

Answered: 103 Skipped: 36



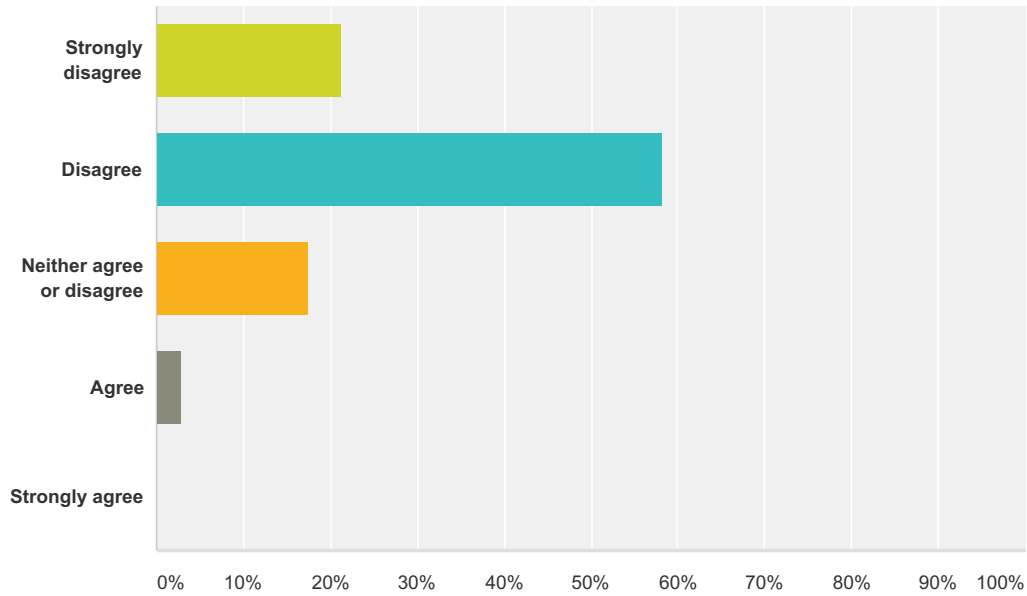
Quiz Statistics

Percent Correct 30%	Average Score 0.4/1.0 (41%)	Standard Deviation 0.49	Difficulty 3/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	1.94% 2
Disagree	0/1	8.74% 9
Neither agree or disagree	0/1	48.54% 50
✓ Agree	1/1	22.33% 23
✓ Strongly agree	1/1	18.45% 19
Total		103

Q24 Geometry and spatial reasoning instruction and experiences in kindergarten classrooms do not play a role in the development of later non-routine problem-solving abilities.

Answered: 103 Skipped: 36



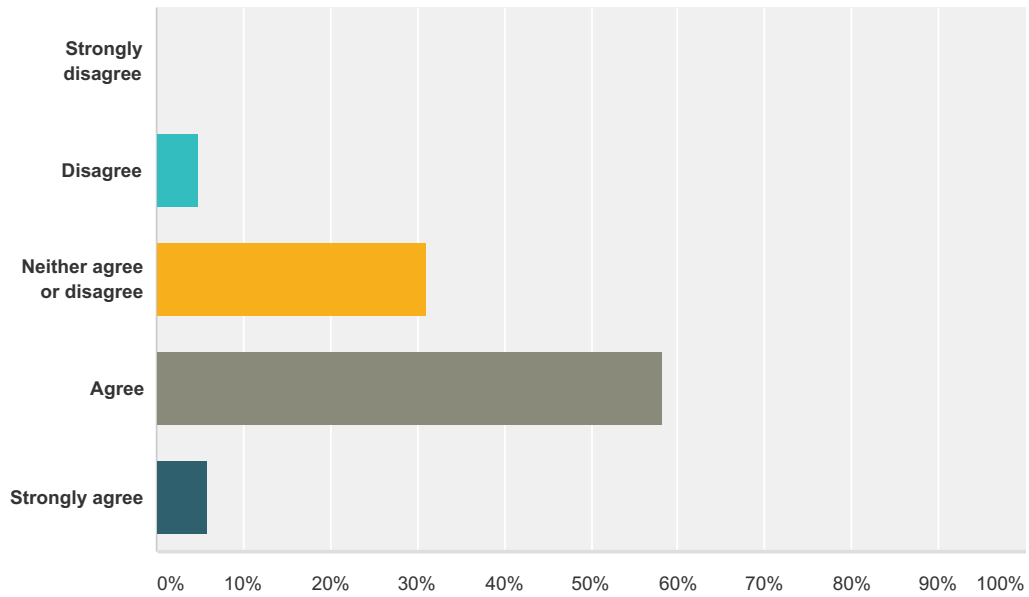
Quiz Statistics

Percent Correct 59%	Average Score 0.8/1.0 (80%)	Standard Deviation 0.40	Difficulty 13/25
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Answer Choices	Score	Responses
✔ Strongly disagree	1/1	21.36% 22
✔ Disagree	1/1	58.25% 60
Neither agree or disagree	0/1	17.48% 18
Agree	0/1	2.91% 3
Strongly agree	0/1	0.00% 0
Total		103

Q25 The development of mathematics understanding in some children is hindered due to lack of attention to spatial skills.

Answered: 103 Skipped: 36

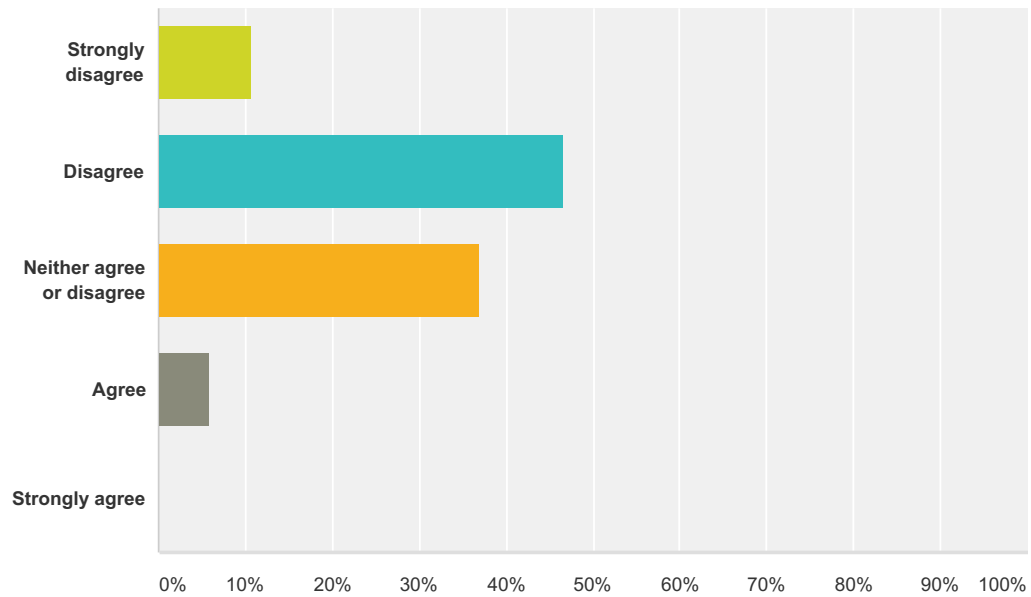


Quiz Statistics			
Percent Correct 47%	Average Score 0.6/1.0 (64%)	Standard Deviation 0.48	Difficulty 9/25

Answer Choices	Score	Responses
Strongly disagree	0/1	0.00% 0
Disagree	0/1	4.85% 5
Neither agree or disagree	0/1	31.07% 32
✓ Agree	1/1	58.25% 60
✓ Strongly agree	1/1	5.83% 6
Total		103

Q26 By the time children reach Grade 7-8, almost all of them have reached the developmental stage where they intuitively understand the spatial structure of simple arrays no matter what their previous math experiences has been.

Answered: 103 Skipped: 36



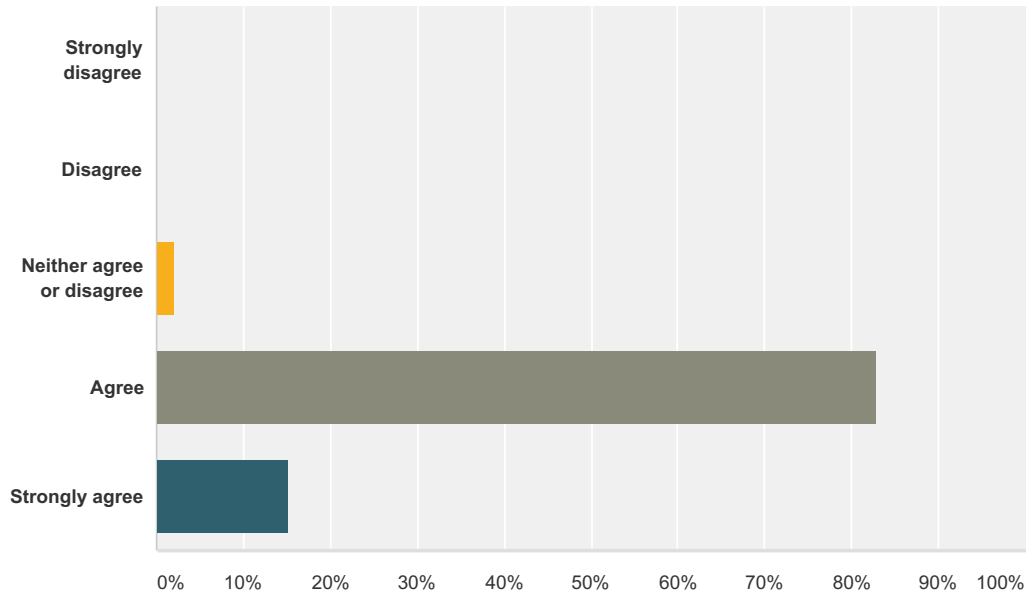
Quiz Statistics

Percent Correct 42%	Average Score 0.6/1.0 (57%)	Standard Deviation 0.50	Difficulty 7/25
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Answer Choices	Score	Responses
✓ Strongly disagree	1/1	10.68% 11
✓ Disagree	1/1	46.60% 48
Neither agree or disagree	0/1	36.89% 38
Agree	0/1	5.83% 6
Strongly agree	0/1	0.00% 0
Total		103

Q27 Spatial thinking and spatial reasoning involves the locations of objects, their shapes, their relations to each other, and the paths they take as they move.

Answered: 99 Skipped: 40



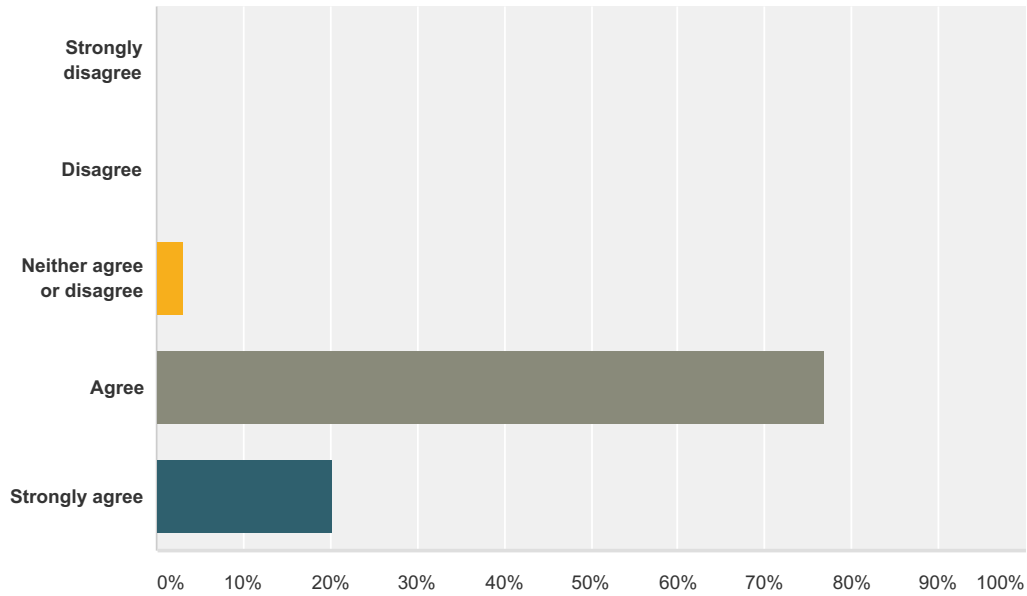
Quiz Statistics

Percent Correct 70%	Average Score 1.0/1.0 (98%)	Standard Deviation 0.14	Difficulty 24/25
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Answer Choices	Score	Responses
Strongly disagree	0/1	0.00% 0
Disagree	0/1	0.00% 0
Neither agree or disagree	0/1	2.02% 2
✓ Agree	1/1	82.83% 82
✓ Strongly agree	1/1	15.15% 15
Total		99

Q28 Spatial thinking and spatial reasoning involves an individual's capacity to mentally compare, manipulate, and transform visual, non-linguistic information.

Answered: 99 Skipped: 40

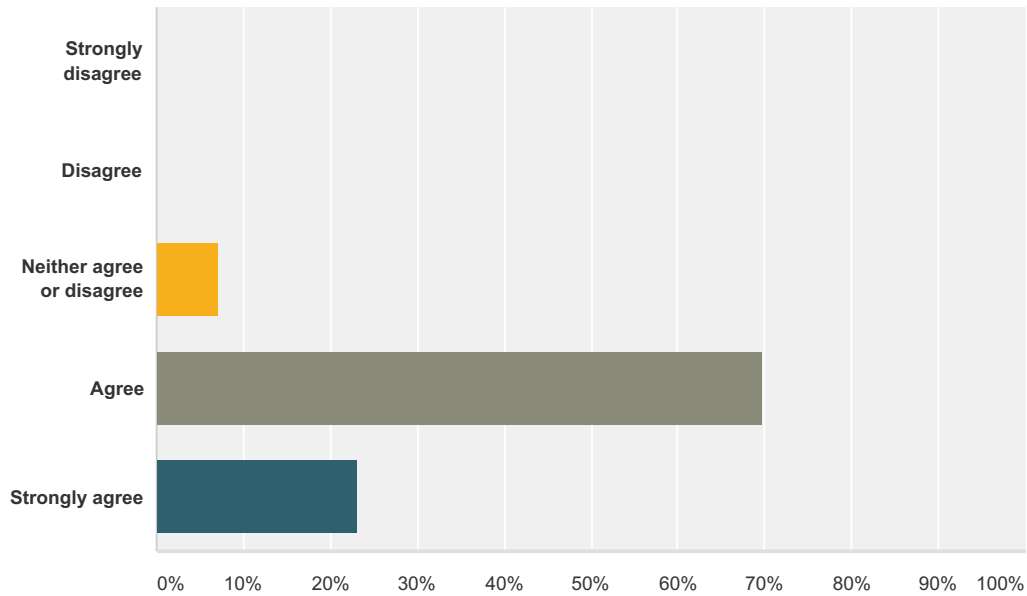


Quiz Statistics			
Percent Correct 69%	Average Score 1.0/1.0 (97%)	Standard Deviation 0.17	Difficulty 23/25

Answer Choices	Score	Responses
Strongly disagree	0/1	0.00% 0
Disagree	0/1	0.00% 0
Neither agree or disagree	0/1	3.03% 3
✓ Agree	1/1	76.77% 76
✓ Strongly agree	1/1	20.20% 20
Total		99

Q29 Spatial thinking and reasoning involves the skills of perspective taking, visualizing, locating, orienting, dimension shifting, path-finding, sliding, rotating, reflecting, diagramming, modelling, symmetrizing, composing, decomposing, scaling, map-making, and designing.

Answered: 99 Skipped: 40

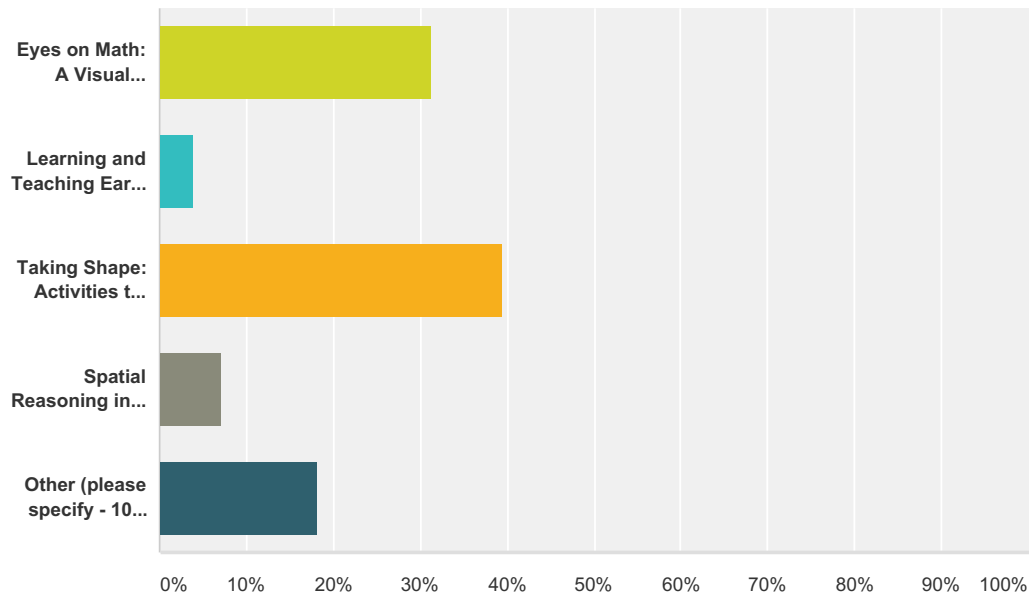


Quiz Statistics			
Percent Correct 66%	Average Score 0.9/1.0 (93%)	Standard Deviation 0.26	Difficulty 20/25

Answer Choices	Score	Responses	
Strongly disagree	0/1	0.00%	0
Disagree	0/1	0.00%	0
Neither agree or disagree	0/1	7.07%	7
✓ Agree	1/1	69.70%	69
✓ Strongly agree	1/1	23.23%	23
Total			99

Q30 If you had a question about spatial and geometric learning in your early years / kindergarten math program, which of the following resources would you be most likely to use to support your understanding?

Answered: 99 Skipped: 40



Quiz Statistics			
Percent Correct 58%	Average Score 1.0/1.0 (100%)	Standard Deviation 0.00	Difficulty 25/25

Answer Choices	Score	Responses
✓ Eyes on Math: A Visual Approach to Teaching Math K to 8 by Marian Small and Amy Lin	1/1	31.31% 31
✓ Learning and Teaching Early Math: The Learning Trajectories Approach	1/1	4.04% 4
✓ Taking Shape: Activities to Develop Geometric and Spatial Thinking K-2	1/1	39.39% 39
✓ Spatial Reasoning in the Early Years by the spatial reasoning study group	1/1	7.07% 7
Other (please specify - 100 characters maximum)	--	18.18% 18
Total		99

#	Other (please specify - 100 characters maximum)	Date
1	?	4/24/2017 8:25 AM
2	Other teachers to see what works in a real classroom	4/20/2017 10:01 AM
3	Not sure	4/17/2017 2:59 PM
4	The Kindergarten program document	4/15/2017 11:30 PM

5	Taking Shape: Activities to Develop Spatial Thinking by Joan Moss and Bev Caswell From The Jackman Institute of Child Study T.O.	4/14/2017 2:06 PM
6	google search	4/13/2017 11:42 AM
7	Guide to Effective Instruction in Mathematics and Google searches	4/12/2017 7:51 PM
8	Don't have any of these resources	4/12/2017 6:59 PM
9	unfortunatley this is the only resource readily available	4/12/2017 9:54 AM
10	Our U of T and Oise team that we learned a great deal of spatial reasoning with.	4/11/2017 8:56 AM
11	My colleagues and the internet.	4/10/2017 9:57 PM
12	None	4/10/2017 9:40 PM
13	have not heard of above. Would research and check internet, math lead	4/10/2017 6:29 PM
14	Don't know. Don't have any of these resources on hand so I'd probably use Google.	4/10/2017 9:25 AM
15	Internet- don't have the books	4/10/2017 7:28 AM
16	Internet	4/10/2017 7:15 AM
17	I would have to look at these books and decide. I am not familiar with them	4/10/2017 7:07 AM
18	I wouldn't know. Not familiar with the above books. Ask someone.	4/10/2017 6:59 AM