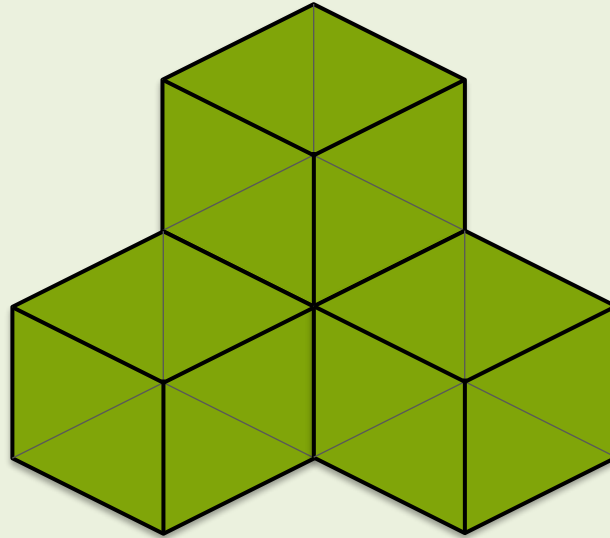




Cubed Maths



CAT4 practice
for students

Reasoning: verbal, quantitative, non-verbal, spatial.

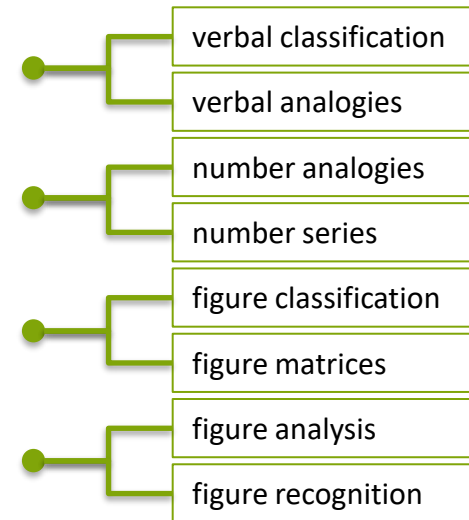
cubed.maths@gmail.com
079 497 497 81



CAT4 Assessment

Assesses *developed* abilities (**not innate abilities**) through 4 batteries:

- **verbal reasoning** – thinking with words
- **quantitative reasoning** – thinking with numbers
- **non-verbal reasoning** – thinking with shapes
- **spatial ability** – thinking with shape and space



“The development of pupil abilities begins at birth and continues through early adulthood. CAT scores are based on experience to date and assists understanding individual development at this point in time. Together with other relevant information, a student’s results can facilitate learning experiences being devised to help improve or sustain current levels of performance.”

Further details on CAT4:

- Introduction: <https://www.gl-assessment.co.uk/assessments/cat4/>
- Support: <https://support.gl-assessment.co.uk/knowledge-base/assessments/cat4-support/>
- Further support and UK admin guide: <https://support.gl-assessment.co.uk/media/2793/cat4-uk-admin-guide.pdf>
- Strategies for learning: <https://support.gl-assessment.co.uk/media/2792/cat4-and-strategies-for-learning.pdf>
- International guide: <https://support.gl-education.com/media/2784/cat4-international-admin-guide.pdf>
- Technical report: <https://support.gl-assessment.co.uk/media/2794/cat4-uk-technical-report.pdf>



CAT4 Assessment

Choosing a test level

Age range covered by norms	CAT4 level	England & Wales	Scotland	Northern Ireland	Ireland (class)	Age of year group
6:00 – 7:11	X	Y2	P3	Y3	1st	6-7
7:01 – 8:11	Y	Y3	P4	Y4	2nd	7-8
6:06 – 8:11	Pre-A	Y3	P4	Y4	2nd	7-8
7:06 – 9:11	A	Y4	P5	Y5	3rd	8-9
8:06 – 10:11	B	Y5	P6	Y6	4th	9-10
9:06 – 11:11	C	Y6	P7	Y7	5th	10-11
10:06 – 12:11	D	Y7	S1	Y8	end of 5th/6th	11-12
11:06 – 13:11	E	Y8	S2	Y9	end of 6th/1st Year	12-13
12:06 – 15:11	F	Y9 & Y10	S3 & S4	Y10 & Y11	2nd and 3rd Year	13-15
14:06 – 17:00+	G	Y11+	S5 & S6	Y12+	4th/TY/5th Year	15+

UK & Ireland
recommended year groups



CAT4 Assessment

Time needed

CAT4 digital - A to G all times in minutes	Assessment time	Time for instructions, examples & practice	Time of session
Part 1 Non-verbal reasoning			
Figure classification	10	5	30
Figure matrices	10	5	
Part 2 Verbal and quantitative reasoning			
Verbal classification	8	5	41
Verbal analogies	8	5	
* Number analogies	10	5	
Part 3 Quantitative and spatial reasoning			
* Number series	8	5	41
Figure analysis	9	5	
Figure recognition	9	5	

*Paper and pencil may be used for number analogies and number series tests.

The assessments are strictly timed. A timer appears on screen and counts down from the allocated time. If a student does not complete the assessment in the given time, it will time out, the next section will begin or the assessment will end.



Verbal reasoning

Verbal Classification

muffle camouflage shroud

quieten	paint	uniform	vanish	mask
---------	-------	---------	--------	------

Verbal Analogies

guess → know : chance →

encounter	luck	doubt	risk	certainty
-----------	------	-------	------	-----------



Quantitative reasoning

Number Series

6 8 11 5 7 10 →

2	4	6	8	12
---	---	---	---	----

Number Analogies

[3 → 22] [2 → 15] [7 → ?]

42	43	49	50	51
----	----	----	----	----



Non-verbal reasoning

Figure Classification

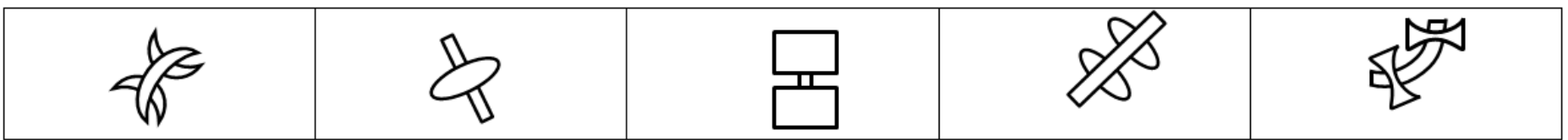
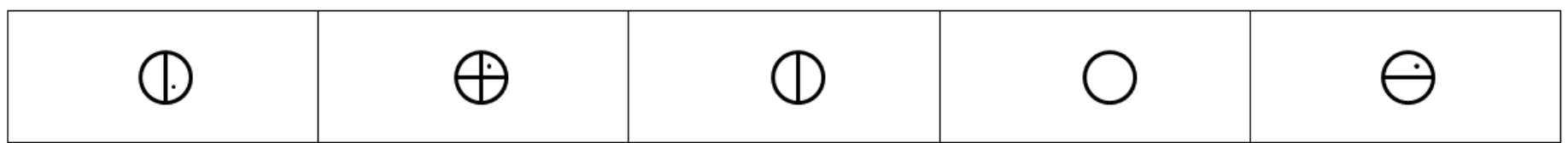
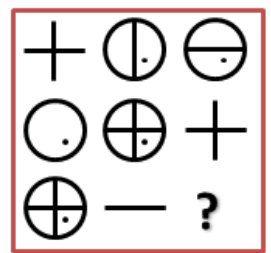


Figure Matrices





Spatial reasoning

Figure Analysis

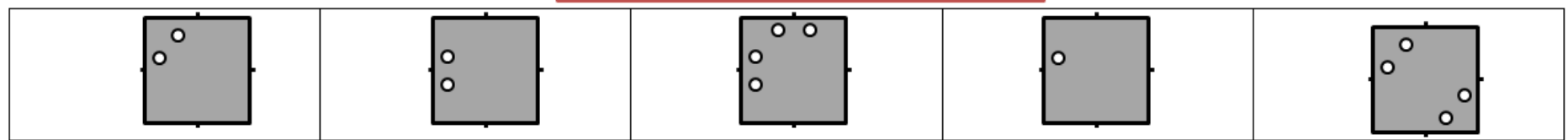
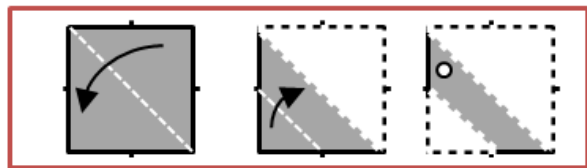
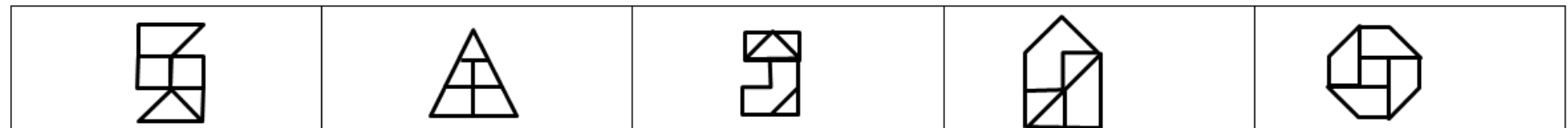


Figure Recognition





Verbal reasoning

Verbal Classification

happy sad frightened

tall	feel	think	new	angry
------	------	-------	-----	-------

Verbal Analogies

cow → milk : chicken →

feather	dinner	egg	hen	bird
---------	--------	-----	-----	------



Quantitative reasoning

Number Series

5 10 15 20 →

25	30	35	40	45
----	----	----	----	----

Number Analogies

[5 → 4] [8 → 7] [4 → ?]

1	2	3	5	6
---	---	---	---	---



Non-verbal reasoning

Figure Classification

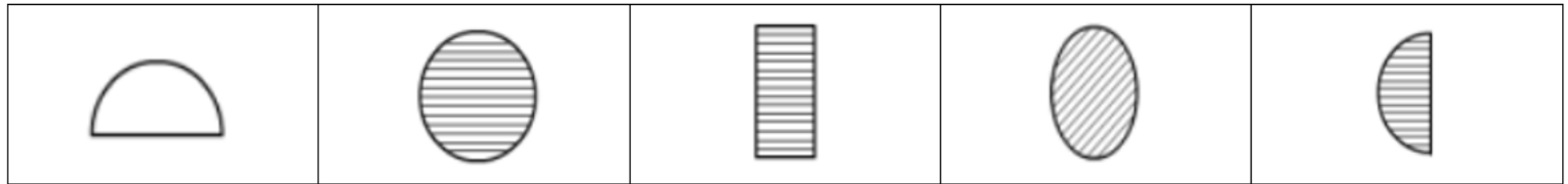
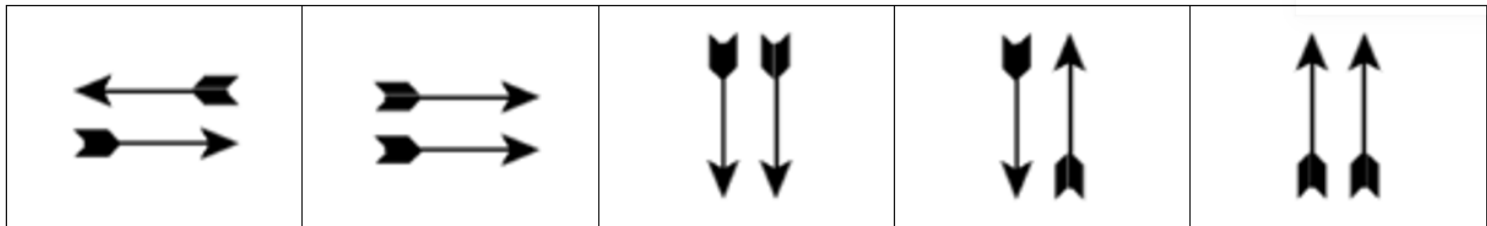
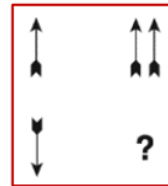


Figure Matrices





Spatial reasoning

Figure Analysis

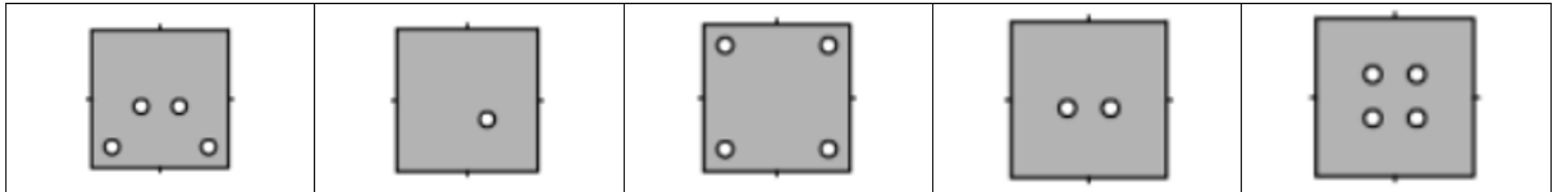
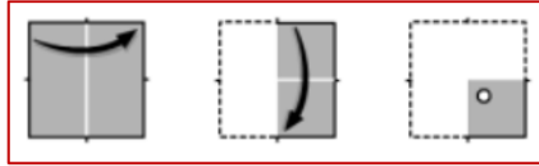
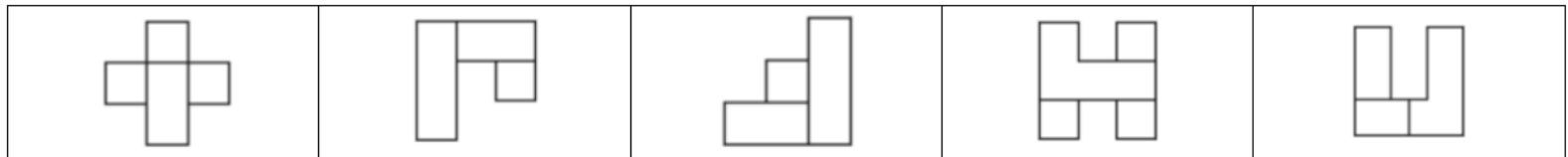
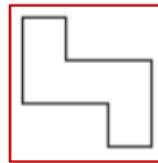


Figure Recognition





Verbal reasoning

Verbal Classification

rain fog sunshine

winter	snow	weather	dark	night
--------	------	---------	------	-------

Verbal Analogies

carpet → floor : curtain →

window	shade	hang	drapes	cloth
--------	-------	------	--------	-------



Quantitative reasoning

Number Series

18 5 17 7 16 9 →

11	12	13	14	15
----	----	----	----	----

Number Analogies

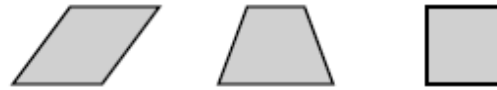
[1 → 2] [5 → 10] [4 → ?]

5	7	8	9	10
---	---	---	---	----



Non-verbal reasoning

Figure Classification






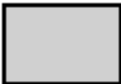

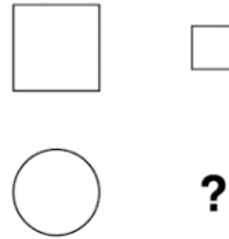





				
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Figure Matrices



				
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Spatial reasoning

Figure Analysis

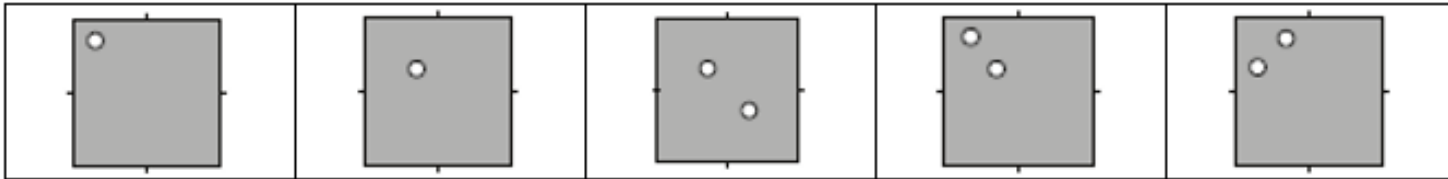
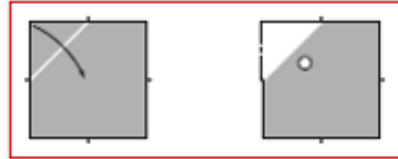
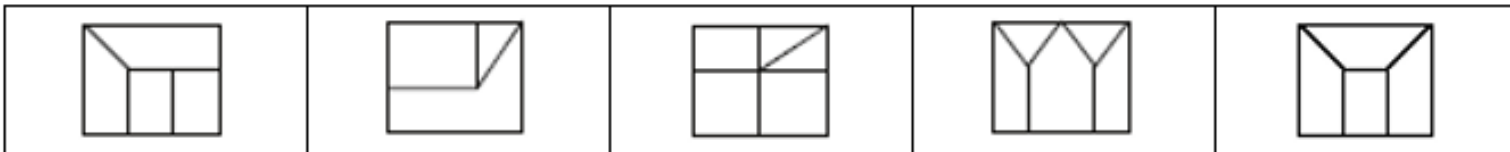


Figure Recognition





Verbal reasoning

Verbal Classification

doubtful confusing vague

false	hidden	insecure	uncertain	fearful
-------	--------	----------	-----------	---------

Verbal Analogies

blue → colour : socks →

clothing	feet	shoes	pair	wear
----------	------	-------	------	------



Quantitative reasoning

Number Series

3 7 15 31 63 →

94	96	97	127	137
----	----	----	-----	-----

Number Analogies

[5 → 13] [11 → 19] [6 → ?]

9	12	14	16	18
---	----	----	----	----



Non-verbal reasoning

Figure Classification

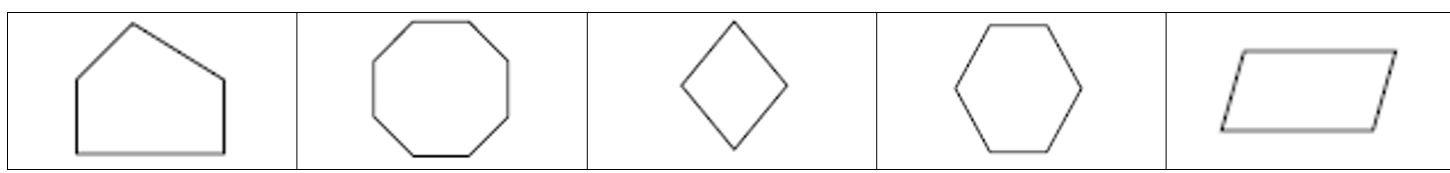
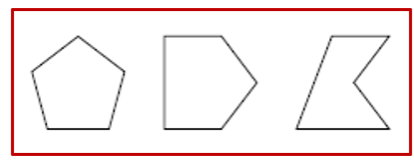
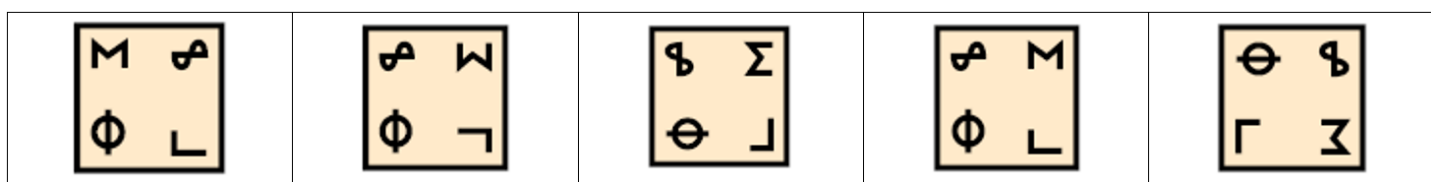
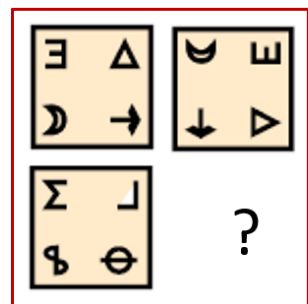


Figure Matrices





Spatial reasoning

Figure Analysis

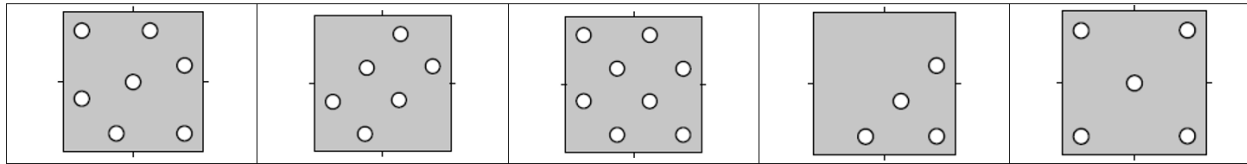
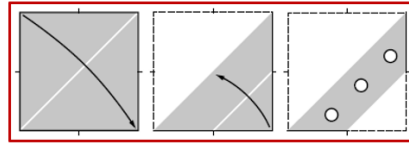
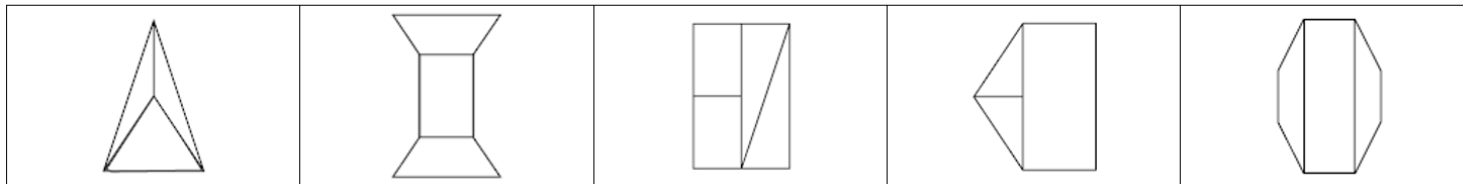


Figure Recognition





Verbal reasoning - verbal classification

green blue red

colour	crayon	paint	yellow	rainbow
--------	--------	-------	--------	---------

speak listen see

mouth	touch	ears	eyes	talk
-------	-------	------	------	------

overjoyed jubilant ecstatic

pleased	glad	happy	content	euphoric
---------	------	-------	---------	----------



Verbal reasoning - verbal analogies

new → old : wet →

rain	drip	hot	sun	dry
------	------	-----	-----	-----

bathroom → toothbrush : kitchen →

bed	light bulb	television	frying pan	toilet
-----	------------	------------	------------	--------

sound → volume : temperature →

music	heat	ice	boiling	fever
-------	------	-----	---------	-------



Quantitative reasoning - number series

15 14 13 12 →

9	10	11	13	14
---	----	----	----	----

3 5 8 12 →

15	16	17	18	19
----	----	----	----	----

20 12 21 10 22 8 →

6	8	22	23	24
---	---	----	----	----



Quantitative reasoning - number analogies

$[2 \rightarrow 3][9 \rightarrow 10][6 \rightarrow ?]$

3	4	5	6	7
---	---	---	---	---

$[6 \rightarrow 3][10 \rightarrow 5][8 \rightarrow ?]$

2	3	4	5	6
---	---	---	---	---

$[2 \rightarrow 6][6 \rightarrow 26][4 \rightarrow ?]$

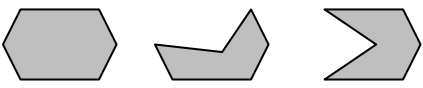
16	18	20	22	24
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$[3 \rightarrow 7][5 \rightarrow 11][4 \rightarrow ?]$

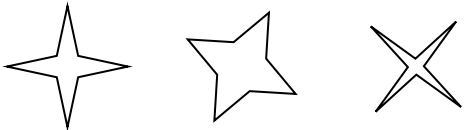
5	6	8	9	10
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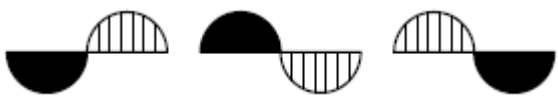
Non-verbal reasoning - figure classification



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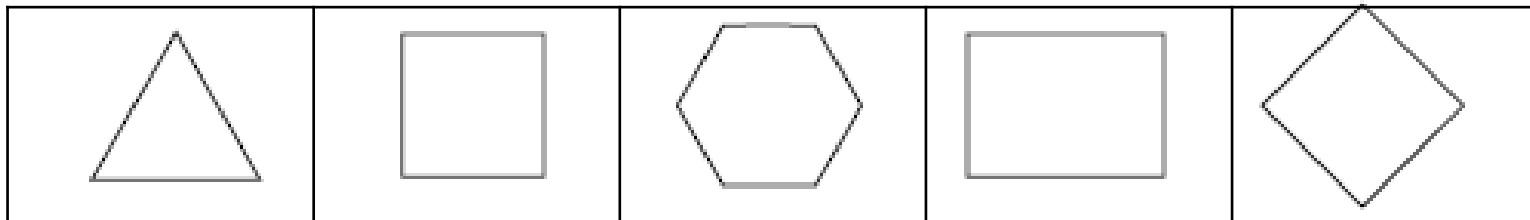
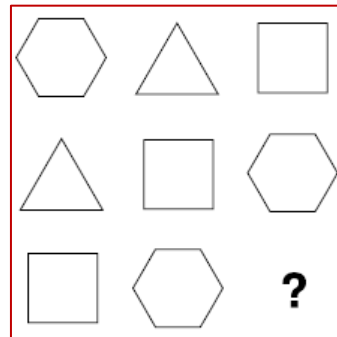
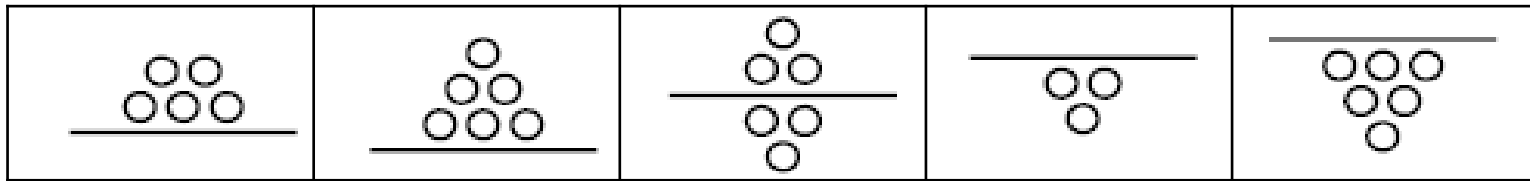
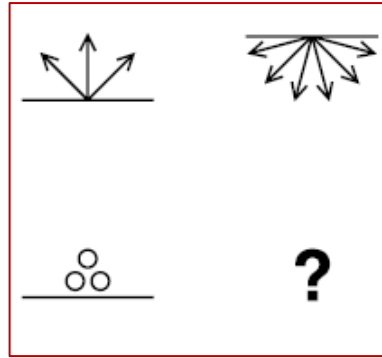
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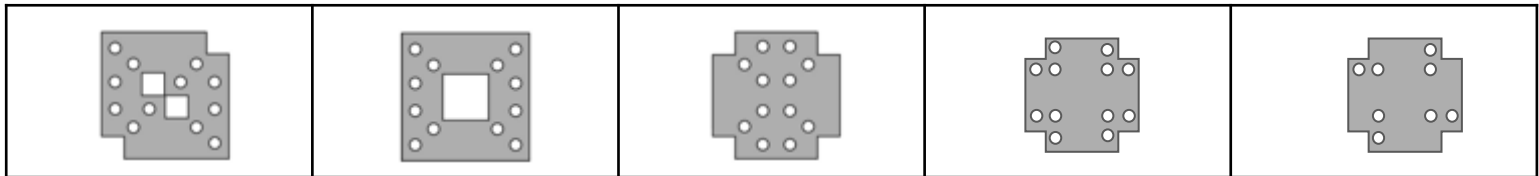
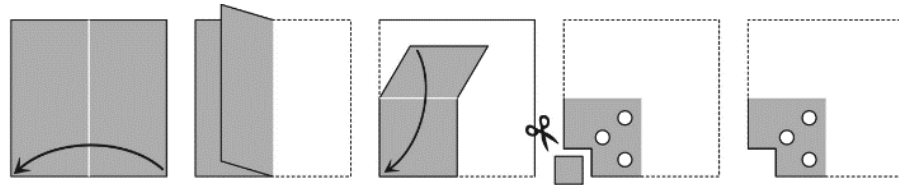
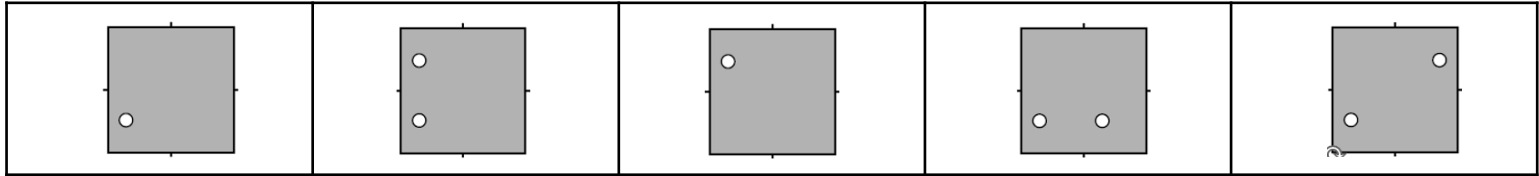
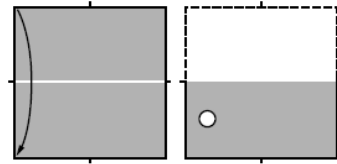


Non-verbal reasoning - figure matrices





Spatial reasoning - figure analysis





Spatial reasoning - figure recognition

