

Jouve-Cerebrals Crystallized- Educational Scale

JCCES

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INSTRUCTIONS

The JCCES is specifically intended for appraising one's level of crystallized processing on a moderately general basis through verbally and mathematically oriented tasks.

The JCCES is a battery divided into three subtests: Verbal Analogies (VA), Mathematical Problems (MP) and General Knowledge (GK) of respectively 42, 38 and 56 items. Each part measures a distinct ability, and once taken as a whole, these tasks give a reasonably good estimate of general crystallized intelligence and scholastic ability.

Prior to start, please take a pen, a paper and if you need it, a calculator. Time of test-taking is not limited. When finished, **email your answers to testing@cerebrals.org**. You may include explanations but stay concise. Furthermore, be it known that many problems have much more than a single solution, sometimes up to about 30 keys, so you do not have to worry about that. However, **multiple answers to one item are not permitted**; you must choose the one you think that is the most appropriate.

You will receive an email including your Crystallized-Educational Index (CEI) and your Verbal Ability Index (VAI) within a week (free of charge).

If you wish to receive a detailed PDF score report, including your Crystallized-Educational Index (CEI), your Verbal Ability Index (VAI), your subtest scores and a written analysis, please send \$29 by [PayPal](#) at testing@cerebrals.org.

In order to send your answers please use the template on last page.

VERBAL ANALOGIES

Find the element that completes the analogy as in the given example:

head : hat :: foot : ? – (shoe)

Where

: = is to

:: = as

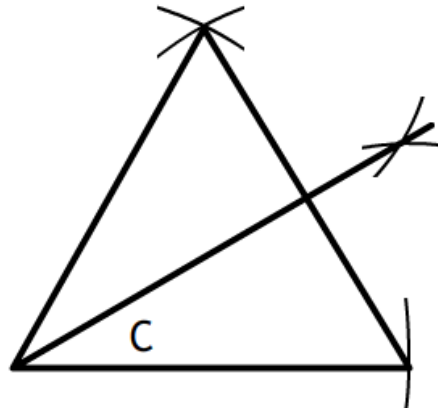
1. cage : animal :: prison : ?
2. library : read :: church : ?
3. stadium : play :: classroom : ?
4. touch : skin :: ? : tongue
5. feather : eagle :: ? : cat
6. hospital : medical doctor :: school : ?
7. pilot : plane :: ? : horse
8. good : beginning :: good : ?
9. slow : late :: fast : ?
10. rod : fishing :: gun : ?
11. imam : mosque :: minister : ?
12. ankle : foot :: wrist : ?
13. spell : magician :: ? : humorist
14. cat : feline :: dog : ?
15. paragraph : sentence :: ? : letter
16. shaking hand : pact :: ? : contract
17. bark : cark :: cap : ?
18. beamish : squeamish :: seamster : ?
19. precipitation : water :: ? : electricity
20. merit : award :: ? : punishment
21. nostalgic : future :: hope : ?
22. mumble : write :: scrawl : ?
23. inviting : party :: ? : court
24. pack : cap :: pirn : ?
25. cool : freezing :: warm : ?
26. candidate : election :: ? : employment
27. wife : polygamy :: husband : ?
28. praise : glory :: ? : infamy
29. nuclide : include :: ? : excepted
30. jellyfish : coelenterate :: starfish : ?
31. tricot : pullover :: ? : tapestry
32. rainbow : trout :: ? : sole
33. iconoclast : image :: guillotiner : ?

34. mammal : viviparous :: reptile : ?
35. mirth : hilarious :: crime : ?
36. wordplay : pundit :: censorship : ?
37. beauty : beast :: guys : ?
38. stem : extirpate :: hide : ?
39. tongues : glossolalia :: repetitions : ?
40. umbrella : shade :: rubella : ?
41. hair : capillary :: female servant : ?
42. Hypathia : Church of Alexandria :: Mata Hari : ? of ?

MATHEMATICAL PROBLEMS

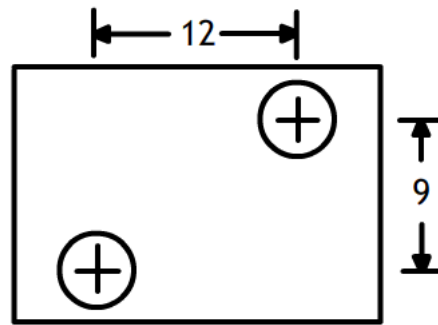
Solve the problems. Pen, paper and calculator allowed.

1. If $3a = a + 8$, then what does "a" equal to?
2. How many degrees has angle C?



3. If each cubic inch of a block of metal weights $\frac{1}{4}$ pound, and the block is 2" by 3" by 4", what will be the total weight (lbs.)?
4. What is a discount of 5% on \$12.00?

5. What is the distance (inches) between the centers of the holes in the figure below?

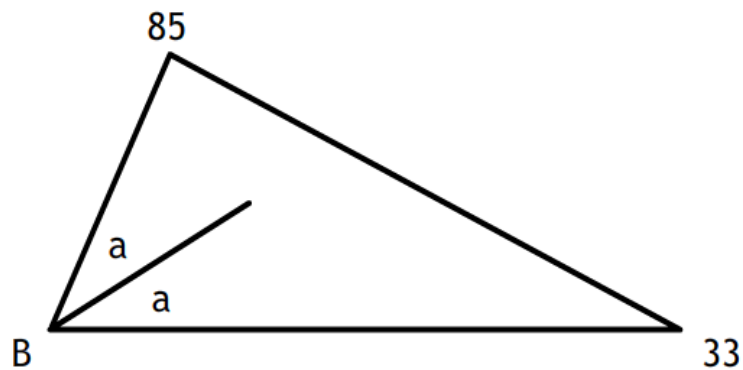


6. If $y = 2 \pi r h$, what does "r" equal to?

Replace the question mark:

$$? / \pi 2h$$

7. If angle B is bisected, what does "a" equal to?



8. An alloy of 3 parts copper by weight, 2 parts zinc by weight, and 1 part tin by weight weighs 24 lbs. What does the zinc weigh (lbs.)?
9. In a five day week, an industrial piece worker wishes to average \$36.00 per week. How many pieces per day must he produce at 30c a piece?
10. If a genius can solve a problem in 15 minutes and another genius in 10, how long (mins.) will it take them to solve it together?
11. What is the result of $2 + 3 * 4 - 3$?
12. What is the square root of 80?

Replace the question mark:

$$? / \sqrt{5}$$

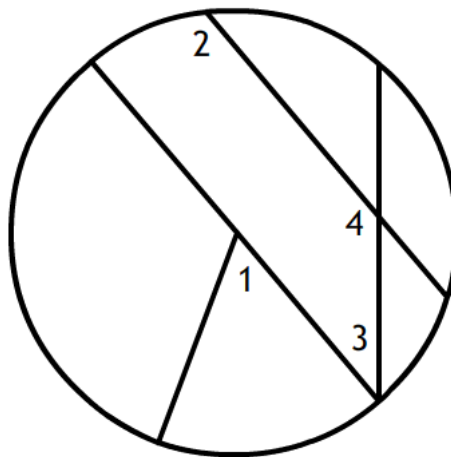
13. A board 10 feet long measures 9 feet 9 inches after drying. What is the percentage of shrinkage?
14. If a regular hexagon is divided into a number of small triangles, what is the common name for each triangle?

15. 300 bees have honey supplies for 4 months. They are joined by 180 bees whose hive has been destroyed by a reckless passer-by. How long (months) will the overall honey supplies last the 480 bees?
16. If 16 men can build a brick garage in 225 hours, how long (hours) will it take for 9 men?
17. How many additions do you need to obtain number 10, using numbers 1, 3, 3 and 5?
18. How many subtractions do you need to obtain number 32, using numbers 1, 5, 6, 7 and 9?
19. A machine costing \$500 was sold after 5 years for \$200. What was in percent the annual rate of depreciation?
20. A rod has a taper of $\frac{3}{4}$ inch per foot. What is the taper of a 4 inch length?

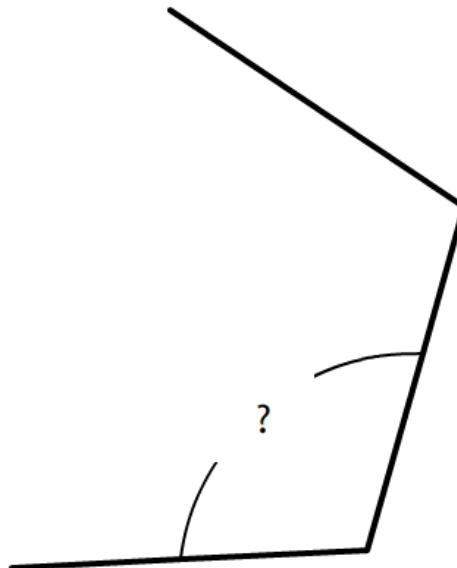
Replace the question mark:

? / 16 inch

21. Which of the angles numbered in the figure below is an "inscribed angle"?



22. How many degrees has the included angle of a regular pentagon?



23. How many subtractions do you need to obtain number 9, using numbers 3, 3 and 18?
24. What does each central angle of a regular pentagon equal to (degree)?

25. If $a = \pi r^2$, what does "a" equal to?

Replace the question mark:

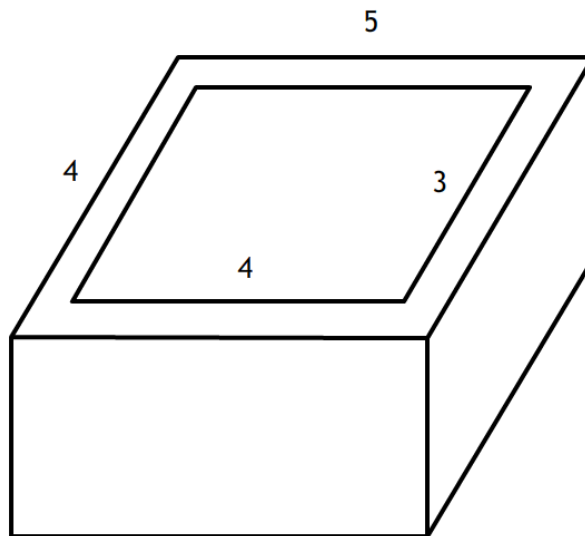
$$\pi d^2 / ?$$

26. How many multiplications do you need to obtain number 130, using numbers 3, 10 and 10?

27. What does in the metric system an inch equal to (mm.)?

28. An Aussie auntie plans to visit her grandchildren in Italy for Christmas and buys 5 panettones for them, but on the plane she remembers that she has 6, not 5 grandchildren. How does she divide the panettones so that all grandchildren get equal parts, without ruining the panettones by dividing them into too small parts? (Give the fractions)

29. What is the volume (cu. in.) of the material in a hollow shaft 2 feet long?



30. What is in diameter (sq. in.) the area of a circle 2 inches?

31. How many persons can collect 40 mushrooms in an afternoon, if six persons can collect 40 mushrooms in 4 days?

32. An insane genius has been invited to a TV show. When the showman asks him how old he is, he doesn't want to reveal his age. However, as he knows the showman's age, he poses a riddle, promising an autographed book to whoever can solve it. He says that both he and the showman are in their twenties, and that he is four times as old as the showman was when he was three times as old as the showman was when he was twice as old as the showman. How old are they?

33. What is the smallest number that is expressible as the sum of two cubes in two different ways?

34. Shane decided to tidy up his wardrobe, where he has shorts and shirts all mixed up. If for any pair of shorts there are as many shirts as other shorts, but for any shirt only half as many shirts as shorts, how many shorts and how many shirts are in the wardrobe?

35. A board $297/8$ inches long is cut into 8 equal pieces. After $1/8$ inch is allowed for each saw cut, what will be the length of each piece? (Give a fraction)

36. A plank 18 inches wide, 2 inches thick, and 6 feet long will contain how many feet?

37. You have two bottles of respectively 7 l and 5 l, and a tap to use whenever you want. How many steps do you need with the shortest method to save 6 l using the two bottles and the tap?
38. A car is travelling at a velocity of V along a road. Consider just one of the car's wheels and its rotation. The central point of the wheel, at the axle, must also be travelling at a velocity of V with respect to the road since it is fixed to the car. Relative to the road, what is the velocity of the points at the top of the wheel (or tire) and at the bottom of the wheel (or tire)?

GENERAL KNOWLEDGE

Answer the questions as best as you can.

1. Who was Van Gogh?
2. What is the name of the sacred Book of the Muslims?
3. On which continent is Egypt located?
4. What is the name of the highest mountain in the world?
5. Who wrote the "Origin of Species"?
6. Who is the spiritual leader of the Catholics?
7. Who was the prime minister of England during WW2?
8. What is the country of origin of the Olympic Games?
9. Who was the author of the simple principle of the "Relativity Principle"?
10. What is the name of the planet that is the closest to the sun?
11. On which continent is Tajikistan located?
12. Who is the inventor of the Telephone?
13. What is the word for a rebellion on a ship?
14. What animal is associated with an Ornithologist?
15. What is the word beginning with the letters FA and finishing with the letters LE for an exact copy?
16. What is the color usually associated with Manfred von Richtofen?
17. What is the name of the highest mountain in Africa?
18. What is the word for a natural hot water fountain?
19. What is the name associated with Napoleon?
20. What is the name of the sacred river in India?
21. What color is associated with the highest mountain in Europe?
22. What well-known character has been created by Cervantes?
23. What is the capital of Finland?
24. Who is the author of "Alice in Wonderland"?
25. What is the word for a complete view of a region in every direction?
26. What is the word for a deficiency in amount?
27. What animal is associated with an Ichthyologist?
28. What is the word finishing with the letters US for being everywhere at the same time?

29. Who is the person studying the life of the past geological periods through analysis of rocks and fossils?
30. Who wrote "Faust"?
31. What is the word for a government by the priests?
32. What is the country behind the "Apparatchiks"?
33. What is the religion of the Copts?
34. Who was the first man to fly over the Atlantic?
35. To yield obsequiously to the will of another is to (?).
36. One who is talkative is said to be (?).
37. I perceive sounds as having characteristic colors. I am a (?).
38. The branch of zoology which relates to reptiles is (?).
39. "Audible to the ear" is an example of (?).
40. What is the word for a government by the wealthy?
41. What is the word beginning with the letters PR for deviating from the truth?
42. Who was Berkeley?
43. Bees are kept in a(n) (?).
44. In whom do the Zoroastrians believe?
45. Professor Stevens is often verbose in his lectures. Today, his remarks were uncharacteristically (?).
46. The strength of Joan's poetry is its original imagery. The weakness is that the lines are often sweet-sounding or (?).
47. "All hands on deck" is an example of (?).
48. What is the word for making something imperfect by cutting off a part?
49. What is the word for indicating the back portion of the head of an animal?
50. The behavior of one who has delusions of grandeur is said to be characterized by (?).
51. What does S mean in the acronym P.S.?
52. The science of interpretation and explanation is known as (?).
53. When the earth is at the point of its orbit which is nearest the sun, it is said to be at its (?).
54. Who is the person studying all phases of languages and literature?
55. What is the word beginning with the letters RA for the process of exact thinking?
56. What is the word beginning with the letters ES and finishing with the letters AL for the "ultimate things"?

ABOUT THE JCCES

The JCCES showed both excellent reliability and criterion-related-validity.

Reliability of the Crystallized-Educational Index (CEI) and the Verbal Ability Index (VAI) as checked by the corrected Split-Half coefficient proved to be very highly satisfactory (.98 and .97 respectively, $N=720$). Coefficients for the subtest T-Scores were also very appropriate and ranged from .91 to .96.

Validity of the two JCCES Indexes was confirmed by very high correlations with the Reynolds Intellectual Assessment Scale Verbal Index (RIAS VIX) which is widely used by US school psychologists. Moreover, the JCCES CEI was closely related to the composites of the pre-recentering Scholastic Aptitude Test (SAT), the SAT-Recentered and the new SAT. Additionally, high correlations were observed between the CEI and the American College Test (ACT), the Graduate Record Examination (GRE), and the Armed Forces Qualification Test (AFQT). Furthermore, the CEI showed excellent correlations with Full Scale IQs (FSIQ) from both the Wechsler Intelligence Scale for Children (WISC) and the Wechsler Adult Intelligence Scale (WAIS), the world leading batteries for cognitive ability diagnosis in children and adults. The VAI was highly correlated with the Verbal IQs (VIQ) of the WISC and the WAIS.

Correlations with other measures (January 28, 2011)

Test	<i>r</i>	<i>M</i>	<i>SD</i>	JCCES <i>M</i>	JCCES <i>SD</i>	<i>N</i>
ACT	.75 (CEI)	28.21	4.05	129.80	13.10	75
ACT English	.74 (VAI)	28.51	4.69	129.09	14.88	35
ACT Math.	.65 (CEI)	26.86	5.17	130.69	13.69	36
ACT Read.	.66 (VAI)	29.53	3.95	129.53	14.87	34
ACT Science	.74 (CEI)	28.59	3.99	132.32	13.42	37
AFQT IQ	.77 (CEI)	122.88	9.24	127.85	13.83	33
GRE	.88 (CEI)	1367.25	119.59	139.18	12.51	40
GRE Verbal	.83 (VAI)	658.84	78.66	137.77	15.57	43
RIAS VIX	.89 (CEI)	122.28	12.23	124.10	15.73	120
RIAS VIX	.89 (VAI)	122.28	12.23	123.90	16.66	120
SAT	.83 (CEI)	1245.00	180.54	131.87	15.41	60
SAT I	.75 (CEI)	1302.37	161.88	129.53	11.92	76
SAT New	.89 (CEI)	1956.59	250.78	129.81	15.53	44
WAIS FSIQ	.90 (CEI)	134.24	13.88	132.29	13.74	38
WAIS FSIQ	.88 (VAI)	134.24	13.88	132.21	15.53	38
WAIS VIQ	.90 (CEI)	136.93	10.48	135.68	9.93	28
WAIS VIQ	.90 (VAI)	136.93	10.48	136.37	12.14	28
WISC FSIQ	.90 (CEI)	131.30	18.58	134.95	18.20	20
WISC FSIQ	.90 (VAI)	131.30	18.58	134.35	19.02	20
WISC VIQ	.86 (VAI)	133.92	19.12	134.31	18.71	14

In other words, the JCCES is an appropriate measure of one's crystallized-educational processing likewise for predicting a wide range of cognitive functioning. Research updates are usually posted on <http://www.cogn-iq.org>.

JCCES Raw Score to CEI Equivalent in Adults 30 - 40 Years

JCCES Raw Score	CEI Equivalent
117	160
107	150
93	140
72	130
55	120
42	110
30	100
19	90
8	80
0	70

JCCES Verbal Analogies and General Knowledge Combined Raw Score to VAI Equivalent in Adults 30 - 40 Years

JCCES Verbal Raw Score	VAI Equivalent
88	160
81	150
71	140
57	130
45	120
35	110
26	100
18	90
10	80
1	70

INDIVIDUAL RECORD FORM TEMPLATE

Name Gender.....

Age: Years..... Months.....

Education..... Occupation.....

Email..... Country.....

Native language.....

Score(s) on previously taken intelligence or college test(s) –if any–.....

.....

Answers in the right order.....

