

DECEMBER 2003

ACT Assessment

(61.E)

MATHEMATICS TEST

60 Minutes—60 Questions

DIRECTIONS: Solve each problem, choose the correct answer, and then fill in the corresponding oval on your answer document.

Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left for this test.

You are permitted to use a calculator on this test. You may use your calculator for any problems you choose,

but some of the problems may best be done without using a calculator.

Note: Unless otherwise stated, all of the following should be assumed.

1. Illustrative figures are NOT necessarily drawn to scale.
2. Geometric figures lie in a plane.
3. The word *line* indicates a straight line.
4. The word *average* indicates arithmetic mean.

DO YOUR FIGURING HERE.

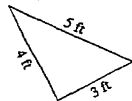
1. If a car averages 20 miles per gallon of gasoline and gasoline costs \$1.20 per gallon, how much would the gasoline cost to drive the car 300 miles?
A. \$72
B. \$36
C. \$24
D. \$18
E. \$15
2. The A-1 Cab Company charges \$2.60 for the first $\frac{1}{2}$ mile of a cab ride and \$1.25 for each additional $\frac{1}{2}$ mile, regardless of how many people are in the cab. Two students share a cab ride from the bus station to their college dormitory, a distance of $2\frac{1}{2}$ miles. If they share the cost of the cab equally, how much is each person's share?
F. \$7.60
G. \$6.50
H. \$5.10
J. \$3.85
K. \$3.80
3. Sam received scores of 86, 81, 82, 80, and 71 on 5 equally weighted tests. Which of the following is his mean score?
A. 83
B. 82
C. 81
D. 80
E. 79
4. Three friends will run a race. If there are no ties, in how many distinct orders can these 3 friends finish the race?
F. 2
G. 3
H. 4
J. 5
K. 6



5. The 1st term in the geometric sequence $-3, 6, -12, 24, -48, \dots$ is -3 . What is the 6th term?

A. 96
 B. 72
 C. -72
 D. -96
 E. Cannot be determined from the given information

6. How many triangles that have integer side lengths are similar to the triangle shown below?



F. 1
 G. 2
 H. 3
 J. 4
 K. Infinitely many

7. When $a = 7$, $b = -3$, and $c = 4$, $bac - ac^2 - ab = ?$

A. -217
 B. -175
 C. -49
 D. 7
 E. 217

A rectangle has a width of $(3x - 2)$ feet and a length of $(4x + 3)$ feet. Which of the following expressions represents the area, in square feet, of the rectangle?

F. $12x^2 - 6$
 G. $12x^2 + x - 6$
 H. $12x^2 + x + 6$
 J. $12x^2 - 17x + 6$
 K. $12x^2 + 17x - 6$

What is 4% of 7.34×10^4 ?

A. 293,600
 B. 29,360
 C. 2,936
 D. 1,835
 E. 183.5

Due to gravitational differences between the Moon and Earth, an astronaut who weighs 198 pounds on Earth weighs, proportionally, 33 pounds on the Moon. How many pounds would an astronaut who weighs 120 pounds on Earth weigh on the Moon?

F. 6
 G. 18
 H. 20
 J. 33
 K. 45

What is the perimeter, in meters, of a square having an area of 4 square meters?

A. 2
 B. 4
 C. 6
 D. 8
 E. 10

DO YOUR FIGURING HERE.

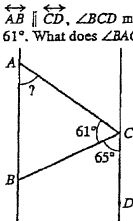


12. The number of bricks, B , needed to build a wall of uniform length L feet and uniform height H feet can be found by the equation $B = 7LH$. A wall of uniform height that is 20 feet long is constructed using 350 bricks. What is the height, in feet, of the wall?

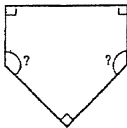
DO YOUR FIGURING HERE.

- F. 0.25
G. 1.75
H. 2.5
J. 17.5
K. 50

13. In the figure below, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$, $\angle BCD$ measures 65° , and $\angle BCA$ measures 61° . What does $\angle BAC$ measure?



- A. 54°
B. 56°
C. 61°
D. 63°
E. 65°
14. Latisha is starting a workout routine. The first day she plans to jog 1 mile. Each day after that, she plans to increase her distance by $\frac{1}{4}$ mile until she is jogging 2 miles per day. Then she plans to continue jogging 2 miles every day. If Latisha begins her workout routine today, how many miles will she jog in the first 7 days?
- F. $7\frac{1}{2}$
G. $11\frac{1}{2}$
H. $12\frac{1}{4}$
J. 14
K. 28
15. The home plate of a baseball diamond is illustrated below. The interior angles that are not right angles are congruent. What is the measure of each of these angles?



- A. 125°
B. 130°
C. 135°
D. 140°
E. 145°



6. $(4a + 3b + 2c) - (2a + 2b - 7c)$ is equivalent to:

- F. $2a + b - 5c$
- G. $2a + b + 9c$
- H. $2a + 5b - 5c$
- J. $2a + 5b + 9c$
- K. $12abc$

DO YOUR FIGURING HERE.

If $f(x) = -2x^3 - 2x^2$, then $f(-2) = ?$

- A. 8
- B. 24
- C. 48
- D. 56
- E. 80

This month, Heather sold 75 figurines in 2 sizes. The large figurines sold for \$15 each, and the small figurines sold for \$10 each. The total amount of money received for the large figurines was the same as the total received for the small figurines. How many large figurines did Heather sell this month?

- F. 25
- G. 30
- H. 37
- J. 45
- K. 50

What are the 2 positive integers such that the square out of their sum is 5 and the square root of their product is 12?

- M. 2 and 3
- P. 3 and 4
- R. 5 and 144
- S. 9 and 16
- T. 12 and 25

$3(4 - y) = 12 - 2(5y - 1)$, then $y = ?$

- $-\frac{2}{13}$
- $-\frac{1}{9}$
- $\frac{2}{13}$
- $\frac{2}{7}$
- $\frac{22}{53}$

The hypotenuse of a right triangle is 12 cm long. The shorter leg is 5 cm long. What is the length, in centimeters, of the other leg of this triangle?

- 7
- 8
- 10
- 17
- $\sqrt{119}$



22. What is the distance between the points with coordinates $(3,4)$ and $(-2,7)$ in the standard (x,y) coordinate plane?

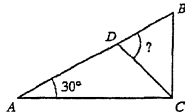
F. $\sqrt{10}$
 G. $\sqrt{34}$
 H. $\sqrt{74}$
 J. $\sqrt{82}$
 K. $\sqrt{122}$

DO YOUR FIGURING HERE.

23. A balloon game at an amusement park is played by tossing darts at a board that duplicates part of the standard (x,y) coordinate plane. A balloon is attached to the board at each point (x,y) such that x and y are integers. If a player breaks 3 balloons attached to adjacent collinear points, the player wins the grand prize. Sheila has broken the balloons at coordinates $(-4,2)$ and $(-5,1)$. Which of the following are the coordinates of a balloon Sheila could break to win the grand prize?

A. $(-3, 3)$
 B. $(-4, 1)$
 C. $(-5, 0)$
 D. $(4, -2)$
 E. $(2, 4)$

24. In $\triangle ABC$ shown below, the measure of $\angle A$ is 30° , $\angle ACB$ is a right angle, D is on \overline{AB} , and \overline{DC} bisects $\angle ACB$. What is the measure of $\angle CDB$, in degrees?

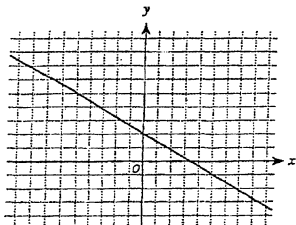


F. 45°
 G. 60°
 H. 75°
 J. 90°
 K. 105°

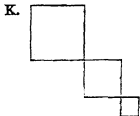
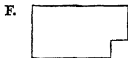


25. One of the following equations, in slope-intercept form, is the equation of the line shown below in the standard (x,y) coordinate plane. Which one?

DO YOUR FIGURING HERE.



- A. $y = -\frac{3}{5}x + 2$
 B. $y = -\frac{3}{5}x - 2$
 C. $y = -\frac{5}{3}x - 2$
 D. $y = \frac{3}{5}x + 2$
 E. $y = \frac{5}{3}x + 2$
26. Each of the figures below can be divided into 3 squares: one with side lengths 6 cm, another with side lengths 4 cm, and the third with side lengths 2 cm. Which figure has the greatest perimeter?





DO YOUR FIGURING HERE.

27. When a bank pays $r\%$ interest, compounded annually, a deposit of $\$P$ increases to $\$P\left(1 + \frac{r}{100}\right)^y$ at the end of y years, where y is a whole number.

Lou initially deposits $\$600$ in an account that pays 4.75% interest, compounded annually. Lou does not make any further deposits or withdrawals. How much money, in dollars, is in Lou's account after 8 years?

- A. $6 \cdot (1 + 4.75)^8$
 B. $6 \cdot (1 + 0.0475)^8$
 C. $600 \cdot (1 + 4.75)^8$
 D. $600 \cdot (1 + 0.0475)^8$
 E. $600 \cdot (1 + 0.0475) \cdot 8$
28. The number $\sqrt{2}$ is irrational; its decimal representation neither terminates nor repeats. How many of the following 4 real numbers are irrational?
 $(\sqrt{2})^2$, $(\sqrt{8} \cdot \sqrt{2})$, $6\sqrt{2}$, $(\sqrt{14} + \sqrt{2})$
- F. 0
 G. 1
 H. 2
 J. 3
 K. 4

29. What is the solution set for the equation

$$x^2 - 12x + 36 = 4?$$

- A. $\{-8, -4\}$
 B. $\{-2, 8\}$
 C. $\{4, 8\}$
 D. $\{5, 8\}$
 E. $\{7, 10\}$

30. For all real numbers a , which of the following is

equivalent to $\sqrt{(\sqrt{a^2})^2}$?

- F. 1
 G. \sqrt{a}
 H. $|a|$
 J. a^2
 K. a^4



31. Which of the following is NOT equivalent to 80% of n ?

DO YOUR FIGURING HERE.

A. $0.80n$

B. $8(0.10n)$

C. $\frac{4n}{5}$

D. $4\left(\frac{n}{5}\right)$

E. $\frac{8n}{100}$

32. Which of the following is the slope of the line with equation $3x + 2y = 7$ in the standard (x,y) coordinate plane?

F. $-\frac{3}{2}$

G. $-\frac{2}{3}$

H. $\frac{2}{3}$

J. $\frac{3}{2}$

K. $\frac{7}{3}$

33. The function $g(x)$ is defined for all real numbers x . Some of the function values are given in the table below. One of the following equations defines the function $g(x)$. Which one is it?

x	-2	0	1	2	3
$g(x)$	5	-3	-1	5	15

A. $g(x) = x - 3$

B. $g(x) = 2x - 3$

C. $g(x) = x^2 + 1$

D. $g(x) = 2x^2 - 3$

E. $g(x) = 3x^2 - 1$

34. If $90^\circ < \theta < 180^\circ$, and $\sin \theta = \frac{5}{13}$, then $\cos \theta = ?$

F. $\frac{13}{5}$

G. $\frac{5}{12}$

H. $-\frac{12}{13}$

J. $-\frac{13}{12}$

K. $-\frac{13}{5}$



Use the following information to answer questions 35–38.

DO YOUR FIGURING HERE.

In the United States, contributions to 8 categories of charitable organizations totaled \$143.5 billion in 1997. The bar graph below shows the distribution of these contributions, in billions of dollars, to the 8 categories. It also gives the percent of change in 1997 contributions compared to 1996 contributions for each category.

1997 Charitable Contributions

Category (change from 1996)	Contributions (billions of dollars)
Religion (+6%)	70.25
Education (+12%)	21.51
Health (+1%)	14.03
Human services (+4%)	12.66
Humanities (-3%)	10.62
Public services (+11%)	8.38
Environment (+7%)	4.09
World affairs (+15%)	1.96

35. The 1997 contributions in the human services category were closest to how many times the 1997 contributions in the environment category?
- A. 2
B. 3
C. 4
D. 5
E. 6
36. What is the median of the 8 percents of change listed on the graph?
- F. 0.5
G. 3.5
H. 4
J. 6.5
K. 7.4
37. Among the following, which is the closest approximation, in billions of dollars, to the 1996 charitable contributions in the humanities category?
- A. 7.43
B. 7.62
C. 10.30
D. 10.95
E. 13.81



DO YOUR FIGURING HERE.

38. If the given bar graph were converted into a circle graph (pie chart), the sector for the religion category would have a central angle measuring (to the nearest degree) how many degrees?

F. 70°
 G. 88°
 H. 147°
 J. 176°
 K. 345°

39. In the right triangle shown below, which of the following expressions gives the correct value of c , in inches?

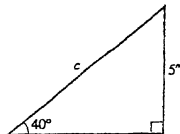
A. $\frac{5}{\cos 40^\circ}$

B. $\frac{5}{\sin 40^\circ}$

C. $\frac{5}{\tan 40^\circ}$

D. $5 \cos 40^\circ$

E. $5 \sin 40^\circ$



40. What is the area, in square inches, of a circle with a diameter of 16 inches?

F. 8π
 G. 16π
 H. 32π
 J. 64π
 K. 256π

41. If $(x^{\frac{1}{2}})^{\frac{1}{3}} = x^p$ for all $x \geq 0$, then $p^2 = ?$

A. $\frac{1}{36}$

B. $\frac{1}{25}$

C. $\frac{1}{12}$

D. $\frac{4}{25}$

E. $\frac{25}{36}$

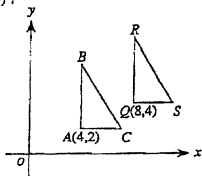
- A ball is thrown upward from a point that is 32 feet above the ground. The ball has an initial velocity of 16 feet per second. The height, h feet above the ground, t seconds after the ball was thrown can be modeled by the equation $h = 32 + 16t - 16t^2$. According to this model, how many seconds after the ball is thrown will it hit the ground?

F. 1
 G. 2
 H. 4
 J. 8
 K. 16

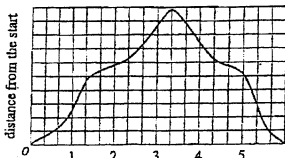


43. The figure below shows $\triangle ABC$ and its translation image $\triangle QRS$ in the standard (x,y) coordinate plane, where A translates to Q , B translates to R , and C translates to S . The length of \overline{BC} is the same as the length of \overline{RS} . Which of the following represents this translation, $T(x,y)$?

DO YOUR FIGURING HERE.



- A. $T(x,y) = (4y, x)$
 B. $T(x,y) = (2x, 2y)$
 C. $T(x,y) = (x + 4, y + 2)$
 D. $T(x,y) = (x - 4, y - 2)$
 E. $T(x,y) = \left(\frac{x}{2}, \frac{y}{2}\right)$
44. The graph below shows the relationship between the time and the straight-line distance a roller coaster car is from the start. Which of the following best describes what the car must have done between times 3 and 4?

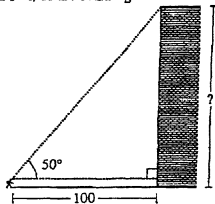


- F. The car stopped and then started again.
 G. The car reached its maximum speed and began to slow down.
 H. The car slowed down but did not stop, and then began gaining speed.
 J. The car went over the highest hill and began going down the hill.
 K. The car reached its maximum distance from the start and began moving closer to the start.

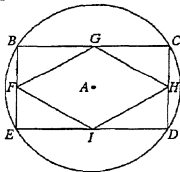


45. Tito wants to find the approximate height of a building. As shown below, when Tito is at a distance of 100 feet along level ground from the building, he estimates that he must look up at an angle of 50° to see the top of the building. If Tito is 6 feet tall, which of the following expressions gives the best estimate of the height, in feet, of the building?

DO YOUR FIGURING HERE.



- A. $\frac{100}{\sin 50^\circ} + 6$
 B. $\frac{100}{\cos 50^\circ} + 6$
 C. $100 \sin 50^\circ + 6$
 D. $100 \cos 50^\circ + 6$
 E. $100 \tan 50^\circ + 6$
46. Point A is at the center of the circle, rectangle, and rhombus in the figure below. The vertices of rectangle $BCDE$ lie on the circle and the vertices of rhombus $FGHI$ are the midpoints of the sides of rectangle $BCDE$.



If the radius of the circle is 2 feet, how long is a side of the rhombus, in feet?

- F. 1
 G. $1\frac{1}{2}$
 H. 2
 J. 3
 K. 4



47. The circle $(x + 3)^2 + (y - 9)^2 = 10$ is shown in the standard (x,y) coordinate plane below. Which of the following is an equation of the line that is tangent to the circle at the point $(0,10)$?

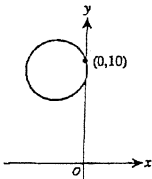
A. $y = -3x - 10$

B. $y = -3x + 10$

C. $y = \frac{1}{3}x - 10$

D. $y = \frac{1}{3}x + 10$

E. $y = 3x + 10$



DO YOUR FIGURING HERE.

48. Points M , N , X , and Y are collinear, M is the midpoint of \overline{XY} , and N is the midpoint of \overline{XM} . What is the ratio of the length of \overline{NY} to the length of \overline{XN} ?

F. 1:2

G. 1:3

H. 1:4

J. 3:1

K. 3:4

49. What are the real solutions for x , if any, to the equation $(|x| - a)(|x| - b) = 0$ if a and b are positive integers?

A. $\pm a$ and $\pm b$

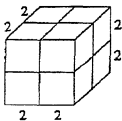
B. $-a$ and $-b$

C. a and b

D. \sqrt{a} and \sqrt{b}

E. There are no real solutions.

50. A large cube consists of 8 small cubes as shown below. Each small cube has an edge length of 2 inches. If 1 small cube is removed, how does the surface area, in square inches, of the original large cube compare to that of the remaining solid?



- F. The original cube has 24 square inches less surface area than the remaining solid.
- G. The original cube has 12 square inches less surface area than the remaining solid.
- H. The original cube has the same surface area as the remaining solid.
- J. The original cube has 12 square inches more surface area than the remaining solid.
- K. The original cube has 24 square inches more surface area than the remaining solid.

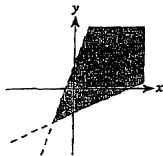


51. Suppose $f(x)$ and $g(x)$ are functions defined for all real numbers x , and $f(x)$ is the inverse function of $g(x)$. If r is a real number and $f(r) = 0$, then $g(0) = ?$

DO YOUR FIGURING HERE.

- A. 0
 B. 1
 C. 2
 D. $\frac{r}{2}$
 E. r
52. The polynomial $x^2 - kx - 30$ is the product of the binomial $(x + 5)$ and another binomial. Which of the following is the integer value of k ?
- F. -11
 G. -6
 H. 1
 J. 6
 K. 11
53. One of the following systems of inequalities is shown graphed as the shaded region in the standard (x,y) coordinate plane below. Which one is it?

- A. $y < 3x + 3$
 $y > \frac{x}{2} - 3$
 B. $y < 3x + 3$
 $y > -\frac{x}{2} - 3$
 C. $y < 3x - 3$
 $y > \frac{x}{2} + 3$
 D. $y < -3x + 3$
 $y > \frac{x}{2} - 3$
 E. $y > 3x + 3$
 $y > \frac{x}{2} - 3$



54. The real number c is positive and the real numbers a and b are such that $ab > 0$ and $a > b$. Which of the following is true for all such a , b , and c ?

- F. $\frac{a}{c} < \frac{b}{c}$
 G. $\frac{c}{a} < \frac{c}{b}$
 H. $a - c < b - c$
 J. $a - c < b + c$
 K. $a + c < b - c$

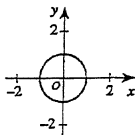


55. One of the following graphs in the standard (x,y) coordinate plane is the graph of the equation $\frac{x^2}{4} + \frac{y^2}{9} = 1$.

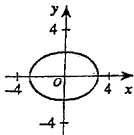
DO YOUR FIGURING HERE.

Which one is it?

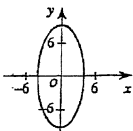
A.



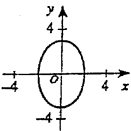
D.



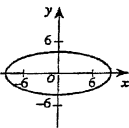
B.



E.



C.



56. Given that a , b , and c are all positive, which of the following is equivalent to $\log\left(\frac{ab^2}{c}\right)$?

F. $\log a + 2 \log b - \log c$

G. $2(\log a + \log b) - \log c$

H. $\frac{2a \log b}{\log c}$

J. $\frac{(\log a)(\log b^2)}{\log c}$

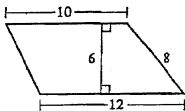
K. $\frac{(\log a)(\log b)^2}{\log c}$



57. How many cubic centimeters are equal to 1 cubic meter?

(Note: 1 meter = 100 centimeters)

- A. 100
 B. 300
 C. 10,000
 D. 30,000
 E. 1,000,000
58. Melanie is helping to paint a geometric design on a school wall. The figure below, with its dimensions in feet, shows the trapezoidal region Melanie agreed to paint. The bases of the trapezoidal region are 10 feet and 12 feet, respectively. By painting the trapezoidal region, how many square feet of the wall will Melanie paint?



- F. 66
 G. 72
 H. 88
 J. 96
 K. 132
59. The table below gives ordered pairs in the standard (x,y) coordinate plane. If $a \neq 0$, which of the following sine functions goes through all of these ordered pairs?

x	0	1	2	3	4	5	6	7	8
y	0	a	0	$-a$	0	a	0	$-a$	0

- A. $y = \sin(\pi ax)$
 B. $y = a \sin\left(\frac{\pi}{2}x\right)$
 C. $y = a \sin(\pi x)$
 D. $y = \sin\left(\frac{\pi}{2}x - a\right)$
 E. $y = a \sin\left(x - \frac{\pi}{2}\right)$
60. At a chess tournament, each person played exactly 1 game with every other person. Twenty-eight games were played. How many people played in the tournament?
- F. 7
 G. 8
 H. 14
 J. 28
 K. 56

DO YOUR FIGURING HERE.

END OF TEST 2

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01/07/04

ACT ASSESSMENT TEST INFORMATION RELEASE REPORT
TEST DATE - 12/03 TEST FORM - 61E TEST CENTER - 17765

ITEM NUMBER	1	1111111112	2222222223	3333333334	4444444445	5555555556	6666666667	77777
ENGLISH CORRECT ANSWER YOUR ANSWER SUBSCORE	DHBFDFDRBH	DFBGAJAJCJ	DFAGCGBFAH	BGBFDFBHDJ	CJAFBJAFCH	DJDGARDHBQ	AHBJBGCHDH	AFDHA
MATHEMATICS CORRECT ANSWER YOUR ANSWER SUBSCORE	DKDKAKBQCH	DHAGCGAGDY	BGAHAKDHCH	EPDHEJDJBJ	AGCKEHBDAH	EHAGEFEFBG		
READING CORRECT ANSWER YOUR ANSWER SUBSCORE	DGDGAHBJCH	CGAJDFCFBJ	AGCGCJBGAF	CJBFAGCFBJ				
SCIENCE REASONING CORRECT ANSWER YOUR ANSWER	BFCHBGAHDG	DHDJDFAJCH	BHCGAFAFDG	BJHBFCHDG				

1st Row: Correct responses to the items on the ACT tests.

2nd Row: Your Responses:

- A plus (+) indicates your response was correct.
- A letter (A through K) is the response you chose, if your answer was incorrect.
- A dash (-) indicates you omitted the item.
- An asterisk (*) indicates you gridded more than one response.

3rd Row: If the test includes subscores, one of the letters below indicates the category to which each item belongs:

English: U = Usage/Mechanics
R = Rhetorical Skills
Math: A = Pre-Algebra/Elementary Algebra
G = Intermediate Algebra/Coordinate Geometry
T = Plane Geometry/Trigonometry
Reading: S = Social Studies/Sciences
L = Arts/Language

Explanation of Procedures Used to Obtain Scale Scores from Raw Scores

On each of the four tests on which you marked any responses, the total number of correct responses yields a raw score. Use the table below to convert your raw scores to scale scores. For each test, locate and circle your raw score or the range of raw scores that includes it in the table below. Then, read across to either outside column of the table and circle the scale score that corresponds to that raw score. As you determine your scale scores, enter them in the blanks provided on the right. The highest possible scale score for each test is 36. The lowest possible scale score for any test on which you marked any responses is 1.

Next, compute the Composite score by averaging the four scale scores. To do this, add your four scale scores and divide the sum by 4. If the resulting number ends in a fraction, round it off to the nearest whole number. (Round down any fraction less than one-half; round up any fraction that is one-half or more.) Enter this number in the blank. This is your Composite score. The highest possible Composite score is 36. The lowest possible Composite score is 1.

ACT Test 61E	Your Scale Score
English	_____
Mathematics	_____
Reading	_____
Science	_____
Sum of scores _____	
Composite score (sum ÷ 4) _____	

NOTE: If you left a test completely blank and marked no items, do not list a scale score for that test. If any test was completely blank, do not calculate a Composite score.

Scale Score	Raw Scores				Scale Score
	Test 1 English	Test 2 Mathematics	Test 3 Reading	Test 4 Science	
36	75	59-60	39-40	39-40	36
35	73-74	58	38	38	35
34	72	56-57	37	37	34
33	71	55	36	-	33
32	70	54	-	36	32
31	69	52-53	35	-	31
30	68	51	34	35	30
29	66-67	49-50	33	34	29
28	65	47-48	31-32	33	28
27	63-64	44-46	30	32	27
26	61-62	42-43	29	30-31	26
25	59-60	40-41	28	29	25
24	57-58	37-39	27	27-28	24
23	55-56	35-36	26	26	23
22	53-54	34	24-25	24-25	22
21	50-52	32-33	23	22-23	21
20	47-49	30-31	22	20-21	20
19	44-46	27-29	20-21	18-19	19
18	41-43	25-26	19	17	18
17	38-40	21-24	18	15-16	17
16	35-37	18-20	17	14	16
15	32-34	14-17	15-16	13	15
14	29-31	11-13	14	11-12	14
13	26-28	09-10	12-13	10	13
12	24-25	07-08	10-11	09	12
11	22-23	06	08-09	08	11
10	20-21	05	07	07	10
9	18-19	04	06	05-06	9
8	15-17	03	05	04	8
7	12-14	-	-	-	7
6	10-11	02	04	03	6
5	08-09	-	03	02	5
4	06-07	01	-	-	4
3	04-05	-	02	01	3
2	02-03	-	01	-	2
1	00-01	00	00	00	1