

TEST TWO QUANTITATIVE ABILITY

Time limit: 35 minutes

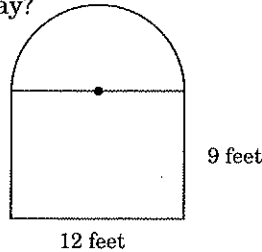
Number of questions: 40

GENERAL DIRECTIONS: You may assume that any figures given in connection with questions are drawn as accurately as possible *except* when it is stated that a particular figure is not drawn to scale. Letters such as x , y , and n stand for real numbers.

For questions 41–60, select the correct answer to each problem and fill in the corresponding circle on the Answer Sheet. You may work mentally or use blank space on the test pages.

41. What is the best common denominator for the fractions $\frac{1}{3}$, $\frac{3}{8}$, and $\frac{5}{6}$?
(A) 18 (B) 12 (C) 24 (D) 48
42. If $5 < x < 9$ and $3 < x < 7$, what is the value of x ?
(A) 6 (B) 5 (C) 9 (D) 4
43. Triangle ABC and triangle DEF are equal in area. If the base of $\triangle ABC$ measures 12 inches, the base of $\triangle DEF$ measures 9 inches, and the altitude of $\triangle ABC$ measures 6 inches, what is the measure of the corresponding altitude of $\triangle DEF$?
(A) 72 inches (B) 10 inches (C) 9 inches (D) 8 inches
44. A centimeter is equal to
(A) 100 meters (B) 10 kilometers
(C) $\frac{1}{100}$ meter (D) 1 milligram
45. If $(4 \times 10^3) + (5 \times 10^2) + 7$ is subtracted from $(6 \times 10^3) + (7 \times 10^2) + (2 \times 10) + 4$, the result is
(A) 2270 (B) 2217 (C) 1217 (D) 2127
46. In the product shown below, what digit does \square represent?
 $(3 \square 6)(4) = 432$
(A) 4 (B) 5 (C) 6 (D) 8
47. Which of the following numbers is equal to $\frac{3}{5}$?
(A) 0.06 (B) $\frac{3}{5}\%$ (C) 60% (D) $5 \div 3$
48. If each side of a square is doubled in length, then
(A) the area of the square is doubled
(B) the area of the square is increased by 50%
(C) the area of the square is multiplied by 4
(D) the area of the square is not changed
49. Mr. Hart bought a sport jacket and paid a sales tax of \$4.50. If the rate of the sales tax was 6%, what was the price of the jacket before the tax?
(A) \$27.00 (B) \$75.00 (C) \$120.00 (D) \$85.00
50. When a number is divided by 7, the quotient is 19 and the remainder is 3. The number is
(A) 133 (B) 136 (C) 130 (D) 140
51. $6 \times 7 \times 8 \times \square = 48 \times 63$. The value of \square is
(A) 8 (B) 9 (C) 12 (D) 6
52. If $x + 6 = y + 4$, then
(A) $x > y$ (B) $x - y = 2$ (C) $y > x$
(D) $x + y = 10$
53. 7% is equal to
(A) 7 (B) 0.7 (C) 700 (D) 0.07
54. At a sale of TV sets $\frac{2}{3}$ of the sets were sold the first day and $\frac{1}{2}$ of the remainder were sold the second day. If 15 sets were left unsold, how many sets were put on sale the first day?
(A) 80 (B) 90 (C) 100 (D) 75

55. The diagram represents a doorway that is a rectangle topped by a semicircle. If the width of the doorway is 12 feet and the height of the rectangular section of the doorway is 9 feet, what is the total area, in feet, of the doorway?



- (A) $108 + 36\pi$
 (B) $108 + 18\pi$
 (C) $108 + 144\pi$
 (D) $54 + 18\pi$

56. If $5 > x > 3$, and x is a positive integer, then $x^2 =$
 (A) 25 (B) 9 (C) 4 (D) 16

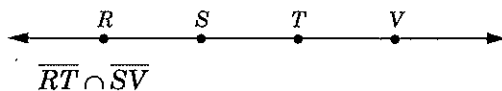
57. In an isosceles right triangle, the measure of each acute angle is
 (A) 50° (B) 45° (C) 90° (D) 40°

58. When written in expanded form, the number 5618 is
 (A) $(5 \times 10^2) + (6 \times 10) + 18$
 (B) $(5 \times 10^3) + (6 \times 10^2) + (8 \times 10) + 1$
 (C) $(5 \times 10^3) + (6 \times 10^2) + (1 \times 10) + 8$
 (D) $(5 \times 10^3) + (6 \times 10^2) + (1 \times 8)$

59. $\frac{5}{\frac{3}{7}} =$

- (A) $\frac{35}{3}$ (B) $5 \div \frac{7}{3}$ (C) $\frac{5 \times 3}{7}$ (D) $5 \times \frac{3}{7}$

60. According to the following number line:



- (A) \overline{RV} (B) \overline{ST} (C) \overrightarrow{ST} (D) \overrightarrow{RS}

DIRECTIONS: For questions 61–80, two quantities are given, one in Column A and the other in Column B. In some cases, additional information concerning the quantities to be compared is centered above the entries in the two columns. After noting all the information given, compare the quantities in Columns A and B and fill in the circles on the Answer Sheet as follows:
 (A) if the quantity in Column A is greater
 (B) if the quantity in Column B is greater
 (C) if the quantities in Columns A and B are equal
 (D) if the information given is not sufficient to determine which quantity is greater

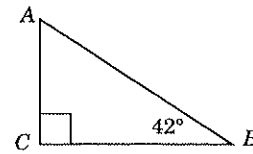
Column A

Column B

61. $\frac{1}{4} + \frac{5}{6}$

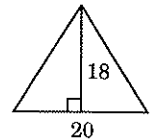
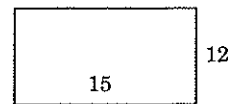
$1\frac{3}{8} - \frac{1}{2}$

$m \angle C = 90^\circ$
 $m \angle B = 42^\circ$



62. AC

CB



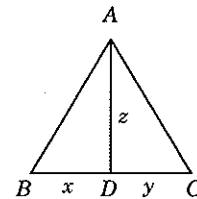
63. Area of this rectangle

Area of this triangle

x and y are integers.
 $x > y$

64. $\frac{1}{x}$

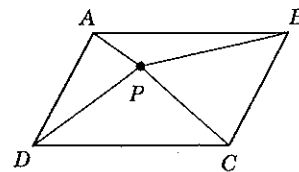
$\frac{1}{y}$



$m \angle B = 55^\circ$
 $m \angle C = 45^\circ$
 \overline{AD} bisects $\angle BAC$

65. $x + y$

$2z$



$ABCD$ is a parallelogram.

66. Area of $\triangle APB$

Area of $\triangle APD$

$a = 3,$
 $b = -1$

67. $7 - a(b + 5)$

$b^2 - 2a$

Column A

Column B

a and b are positive integers with $a > b$.

68. $\frac{a}{b}$ $\frac{b}{a}$

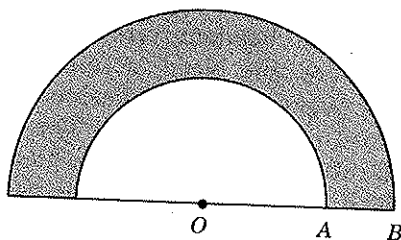
The ratio of Arthur's money to Ben's money is 4:3. If Arthur gives Ben \$5, the two boys will have equal amounts.

69. Arthur's money \$25

$$\begin{aligned} 2x + y &= 11 \\ 2x - y &= 5 \end{aligned}$$

70. x y

71. $\frac{\frac{7}{6} - \frac{1}{4}}{\frac{5}{6}}$ $\frac{\frac{1}{6} + \frac{5}{12}}{\frac{1}{9}}$



O is the center of both circles.
 $OA = 6$,
 $AB = 4$

72. Area of shaded semicircle Area of smaller portion

$$a > b > c,$$

a , b , and c are positive integers

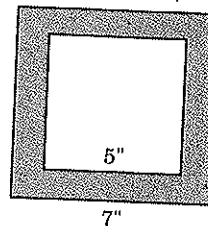
73. b^2 ac

$$\begin{aligned} x + \frac{1}{3}, \\ y = \frac{1}{6} \end{aligned}$$

74. $\frac{1}{x} + \frac{1}{y}$ $\frac{x+y}{xy}$

Column A

Column B



A side of the inner square measures 5 inches, and a side of the outer square measures 7 inches.

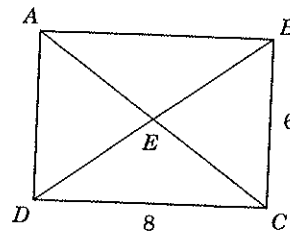
75. Area of inner square Area of shaded portion

$$\begin{aligned} 3x - 1 &= 15 \\ 2y + 5 &= 12 \end{aligned}$$

76. x y

$$\begin{aligned} \frac{x}{6} &= 2 + \frac{4}{6} \\ \frac{y}{7} &= 6 + \frac{3}{7} \end{aligned}$$

77. x y



$ABCD$ is a rectangle
 $BC = 6$,
 $DC = 8$

78. DE 5

$$\begin{aligned} x &= 5, \\ y &= -3 \end{aligned}$$

79. $x^2 + y^2$ $(x+y)^2$

Mr. Ames drives a distance of 180 miles in 5 hours. The return trip over the same distance takes him 4 hours.

80. Mr. Ames's average speed 40 miles per hour