

# SANGREN-REIDY SURVEY TESTS IN ARITHMETIC

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Division III—For Grades Seven, Eight, and Nine  
 Form 1

Test	Score
1. Decimals	
2. Prob. Solv.	
3. Mensuration	
4. Percentage	
TOTAL	

Name..... Date.....

Age..... Birthday.....  
Years Months

Grade..... School.....

City..... State.....

- |  |              |
|--|--------------|
| ( ) (r) Find the interest on \$800 for 3 months at 8%. | ( ) (h) 250% |
| ( ) (q) Find 20% discount on a \$10.00 hat.            | ( ) (g) 175% |
| ( ) (p) 84 is 6% of what amount?                       | ( ) (f) 40%  |
| ( ) (o) 10 = what % of 100?                            | ( ) (e) 25%  |
| ( ) (n) 27% of \$200.                                  | ( ) (d) 3.61 |
| ( ) (m) 3 1/8%   | ( ) (c) 1.75 |
| ( ) (l) 5 1/8%   | ( ) (b) .76  |
| ( ) (k) 15 1/2%  | ( ) (a) .15  |
| ( ) (j) 150%   |              |
| ( ) (i) 25%  |              |
- Change these percents to decimal fractions:
- Change these percents to common fractions:

Directions: Solve these problems. Place the answers in the parentheses ( ) at the right. Use other paper to figure on if you need to.

TEST 4, PERCENTAGE (Time: 4 minutes)

TEST 1. Time: (10 minutes)

A. Division of Decimals

(a)	(b)	(c)	(d)
$28 \overline{)4258.3}$	$.04 \overline{).07}$	$32 \overline{)31.149}$	$332 \overline{)2093.45}$

(e)	(f)	(g)	(h)
$.033 \overline{)438.2}$	$23.2 \overline{)4.845}$	$3.02 \overline{)15.00}$	$.255 \overline{)26.643}$

B. Reading Problems

Mr. Brown sold 154 bushels of corn on Monday, 90 bushels on Tuesday, and 67 bushels on Wednesday. Mr. Jones sold .89 as many bushels during these same days. How many bushels of corn did Mr. Jones sell?

- (i) What quantities in this problem are to be combined for Mr. Brown's sales? . . . . .
- (j) What number is given to express what Mr. Jones sold? . . . . .
- (k) What is called for in this problem? . . . . .
- (l) Write here the names of all the processes or operations to be used in solving the problem. . . . .
- (m) What is the correct answer? . . . . .  
(Do your work on margin of paper.)

Mr. Smith bought a radio for \$125. After six months, he sold it at a loss of  $33\frac{1}{3}\%$ . Find the amount of loss and the selling price.

- (n) What is given to express the selling price? . . . . .
- (o) What is called for in this problem? . . . . .
- (p) Write here the names of all the processes or operations to be used in solving this problem. . . . .
- (q) What are the correct answers? . . . . .  
(Do your work on margin of paper.)

TEST 2, PROBLEM SOLVING (Time: 10 minutes)

Directions: Find the answers to these problems. Write the answers in the parentheses ( ) at the right. Use other paper to figure on, if you want to.

- |  |        |
|--|--------|
|  | Answer |
| a. Bob and Jack were trying to gain points for their team in a game. Bob won 54 points and Jack 69. How many had they both won? - - - - -  | ( )    |
| b. A baseball team had been scheduled to play 48 games of baseball but because of rain during the season 9 of these had been cancelled. How many games did they really play? - - - - -   | ( )    |
| c. In an achievement test Mary scored 19 points and Elizabeth scored 6 times as many. How many points did Elizabeth score? - - - - -   | ( )    |
| d. There are 1953 books in the children's library. Each of nine grades uses the library. What is the average number of books for each grade? - - - - -   | ( )    |
| e. Ted had a savings account. During the first three months of the year he deposited \$20.75. During the following three months he deposited \$39.25, but he had to withdraw half of the entire sum later. How much had he left in the account? -                | ( )    |
| f. Three boy scouts were carrying a message in relays. The first carried the message $2\frac{1}{2}$ miles; the second $1\frac{7}{8}$ miles; and the third $2\frac{1}{4}$ miles. How far was the message carried? - - - - -                                       | ( )    |
| g. A certain car will run 20.6 miles on a gallon of gas while it requires a gallon for every 14.2 miles in another car. How much farther will the first car run than the second car on a gallon of gasoline? - - - - -   | ( )    |
| h. Japanese film producers make about 700 important pictures each year, at an average cost of less than \$3,000 or about $\frac{1}{75}$ of the cost of a first run picture in this country. What is the cost of such a first run picture in the United States? - | ( )    |
| i. Mary was given material for a dress. When she measured it she found she had 3 yds. and 3 ins. The pattern called for $2\frac{5}{8}$ yds. How much of the goods will she have left after making the dress? - - - - -   | ( )    |
| j. On the average, 70,000,000 bu. of barley require about 3,000,000 acres for its production. Barley production one year was about 300,000,000 bu. How many acres were under cultivation? - - - - -  | ( )    |
| k. What will 100 dollars be worth in 3 years with compound interest at 5%? - - -   | ( )    |
| l. A dealer takes a car in on a trade for \$500. He later sells the car for \$675. What was the gain in percent over the price paid in the trade? - - - - -  | ( )    |
| m. An electric ice-box if bought for cash may be had at 18% discount, the price being \$110.00. What is the cash price? - - - - -  | ( )    |
| n. The radius of a sun dial is $1\frac{1}{2}$ ft. What is the circumference? - - - - -   | ( )    |
| o. The farm mortgage debt in the United States increased from about \$3,320,000,000 in 1910 to \$9,468,000,000 in 1928. What is the percent of increase in 1928 over 1910? - - - - -   | ( )    |

# TEST 3, MENSURATION (Time: 10 minutes)

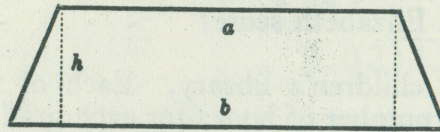
**Directions:** Solve these problems. Place the answers in the parentheses ( ) at the right. Use other paper to figure on if you need to.

- a. Find the circumference of a circle if the diameter is 3 feet. - - - - - ( )
- b. Find the area of a circle if the radius is four feet. - - - - - ( )
- c. Find the area of a rectangle that is 3 feet wide and 8 feet long. - - - - - ( )
- d. What is the distance around a square lot that contains 5,625 sq. ft.? - - - ( )
- e. Find the area of a trapezoid with these dimensions:

$b = 14$  feet

$a = 12$  feet

$h = 10$  feet



- f. Find the area of a triangle if the base is 4 feet and the altitude is 2 feet. ( )
- g. Find the volume of a cylinder with these dimensions:  
 area of base = 5 square feet  
 height = 15 feet ( )
- h. Find the volume of a rectangular prism:  
 area of base is 45 square inches  
 height is 8 inches ( )
- i. Find the hypotenuse of a right triangle:  
 base is 6 inches  
 altitude is 10 inches ( )
- j. Find the total surface area of the three sides of a triangular prism, if  
 side of base is 10 feet  
 height is 25 feet ( )
- k. The volume of a sphere is  $\frac{4}{3} \pi r^3$ . What is the volume of a ball 2 inches in diameter? - - - - - ( )

AREA IN THOUSAND SQUARE MILES								
LAKES	0	5	10	15	20	25	30	35
Superior								
Michigan								
Huron								
Erie								
Ontario								

- l. The graph to the left shows the comparative sizes of the Great Lakes. Each square represents 5,000 square miles. Which of the lakes is the third largest? ( )
- m. Approximately what percent is the area of Lake Ontario of the area of Lake Superior? - - - ( )