

BUSINESS ARITHMETIC

Tuesday, August 22, 1939

NAME OF SCHOOL

NAME OF CANDIDATE

Fill above blanks before signal to begin work is given by examiner.

Do not open this paper until the signal is given.

Examiner will place this paper closed on desk of each candidate. Candidate will open the paper and begin work at signal from examiner. All parts of the rapid calculation test are to be worked mentally and the results placed on the sheet. At the end of 15 minutes, work must stop and the sheet used for this part of the examination must then be detached from the rest of the question paper and immediately handed to the examiner.

All work must be done with pen and ink.

BUSINESS ARITHMETIC RAPID CALCULATION TEST

Tuesday, August 22, 1939 — 8.30 to 11.30 a. m.

1-2 a Add [4]

67432
 5864
 72913
 806
 1239
 6741
 945
 7893
 475
 6894
 7932
 5798
 3674
 5862
 4936
 3062
 5431
 2578

b Underline the correct answer for *each* of the following: [4]

A note that matured on August 18, 1939, was discounted on July 18, 1939. The exact number of days from the date of discount to the date of maturity is (30; 40; 31; 32) days.

$2\frac{1}{3}\phi$ per pound is equivalent to (\$2.20; \$22; \$44; \$440) per ton.

$\frac{1}{5}\%$ of \$800 is (\$.16; \$1.60; \$16; \$160)

$.86 \div .5 = (.172; 1.72; 17.2; 172)$

c Make the extensions: [4]

428 articles @ \$.12 $\frac{1}{2}$ =
 88 articles @ \$1.75 =
 120 articles @ \$.02 $\frac{1}{2}$ =
 62 $\frac{1}{2}$ pounds @ \$.24 =

d Find the interest on *each* of the following: [4]

\$500 for 3 months at 6 % =
 \$180 for 20 days at 4 $\frac{1}{2}$ % =
 \$480 for 30 days at 4 % =
 \$600 for 90 days at 2 % =

e Place answers in proper columns: [4]

<i>Selling price</i>	<i>Cost</i>	<i>Gain</i>	<i>Rate of gain on selling price</i>	<i>Rate of gain on cost</i>
\$ 48	\$ 32	\$16
\$120	\$100	\$20

276TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, August 22, 1939 — 8.30 to 11.30 a. m., only

Write at top of first page of answer paper (a) names of schools where you have studied, (b) number of weeks and recitations a week in business arithmetic previous to entering summer high school, (c) number of recitations in this subject attended in summer high school of 1939.

The minimum time requirement is five recitations a week for a school year. The summer school session in business arithmetic will be considered the equivalent of one semester's work during the regular session or five recitations a week for half a school year.

For those pupils who have met the time requirement the minimum passing mark is 65 credits; for all others 75 credits.

For admission to this examination attendance on at least 30 recitations in this subject in a registered summer high school in 1939 is required.

Answer questions 1-2 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown. Practical business methods must be used in solutions.

1-2 Rapid calculation test on attached sheet. [20]

3 Answer all parts of this question. [10] [Deduct 2 credits for each incorrect answer. Answers only are required in this question.]

- a A studio couch listed at \$80 is billed at \$72. What rate of discount is allowed?
- b What is the difference in amount between $\frac{1}{2}$ of \$100 and $\frac{1}{2}\%$ of \$100?
- c Machinery that cost \$40,000 was valued at the end of eight years at \$8000. What was the average annual depreciation?
- d At \$2.25 a square yard, how much will it cost to cover with inlaid linoleum a floor that is 12 feet long and 8 feet wide?
- e An article was sold for \$24, which was 20% below cost. What was the cost?

4 What monthly rental must be charged for a house costing \$8500 to realize a net profit of 6% on the original investment, if taxes are \$225, repairs \$100, insurance \$25.50 and water bill \$15.50? [10]

5 James Harvey submitted the following facts on his income-tax blank: salary \$5000, commissions \$400, bonus \$250, interest from bank deposits and bonds \$1560, dividends from stock \$640. He claimed the following deductions: interest on mortgage \$400, taxes \$350, contributions for religious and charitable purposes \$500.

Find the amount of his normal income tax if he is allowed an exemption of \$2500 as a married man and \$400 each for three minor children, the rate being 2% on the first \$1000 and 3% on the second and third \$1000. [10]

6 A retailer bought boys' sweaters at \$18 per dozen, less 20% and 10%. At what price must he sell each sweater to gain $33\frac{1}{3}\%$ on the selling price? [10]

7 Henry Brown, a salesman, is paid a salary of \$50 a week and a commission of 3% on all sales in excess of \$3000 in any single week. His traveling expenses not to exceed \$45 per week are paid by the company. Brown submitted the following report for two weeks' work:

	Sales	Traveling Expenses
First week	\$4700	\$42.00
Second week	5200	37.50

a What was the total amount of Brown's earnings for the two weeks? [8]

b What was the amount of the check which the company mailed Brown after receiving his report? [2]

8 You wish to borrow \$200 on a note and pay it back in instalments of \$50 each month on the principal. The total interest and bank charges made by a certain bank for this loan on a direct basis will be \$4.50. A loan company will charge 3% a month on that part of the loan which does not exceed \$150, and $2\frac{1}{2}\%$ a month on that part of the loan which exceeds \$150.

a Find the total interest cost that would be charged by the loan company. [In your solution, show the interest to be paid each month.] [8]

b From which concern would it be better to borrow? How much better? [2]

[OVER]

9 The employees of the Johnson Gravel Company are paid on the basis of a 40-hour week with time and a half for overtime. During the month of April, Horace Belton worked 156 regular hours and 12 hours overtime; during May he worked 154 regular hours and 8 hours overtime; during June he worked 160 regular hours and 4 hours overtime. Belton's rate of pay is 50 cents an hour.

- a Find Belton's total wages for the three months. [6]
- b The company deducted 1% from Belton's wages as his contribution to the old-age benefit. What was the net amount which Belton received? [2]
- c According to Title VIII of the Social Security Act, the employer is required to deduct 1% from the employees' wages and to make an equal contribution to the fund. The total pay roll of the Johnson Gravel Company for the three months was \$7500. What amount did the company pay to the federal government? [2]

10 A new automobile which weighs 3500 pounds and runs 18 miles on a gallon of gasoline was driven 25,200 miles during 1938 with no accidents and no replacements. The owner paid an average of \$1.10 for each 5 gallons of gasoline purchased, \$60 for insurance, \$75 for oil, grease and incidentals. The state charged for license plates 50 cents for each 100 pounds of the car's weight.

- a How many gallons of gasoline were used? [2]
- b What was the cost of the gasoline? [2]
- c What was the cost of the license plates? [2]
- d What was the total amount paid out for the car in 1938? [2]
- e What was the amount of the state gasoline tax, if the rate is 4 cents a gallon? [2]

11 On May 1, James Gray received from the bank his monthly statement together with canceled checks. According to the statement the bank balance was \$674.13. On the same day the checkbook balance was \$383.44. When comparing the canceled checks and the statement with the checkbook, Gray found that a check for \$4.62 had not been entered in the checkbook, a check for \$78.90 had been entered on the stub as \$87.90, a deposit of \$50 had not been entered, and the following checks were outstanding: \$96.24, \$50.72, \$89.35.

- a Reconcile the balances. [8]
- b On the statement which you have prepared, indicate the correct checkbook balance. [2]

12 On February 28, 1939, John Raymo purchased 10 shares of Excelsior stock of no par value at \$29 $\frac{7}{8}$ a share, for which the broker charged \$3 commission for buying and a tax charge of 90 cents. Raymo held the stock until May 1, 1939, when he sold the stock for \$35 $\frac{3}{8}$ a share and paid a commission of \$3 for selling and taxes amounting to 91 cents. During the time that Raymo held the stock, he received a dividend of 50 cents a share.

- a For how much did the broker bill Raymo when the stock was purchased? [3]
- b How much did Raymo receive from the broker who sold the stock? [3]
- c If Raymo lost \$2 bank interest by withdrawing the money, how much profit did he make? [4]