BUSINESS ARITHMETIC
Tuesday, June 20, 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

1–2 *a* Complete the following summary of sales: [4]

Department	Sales for April	Sales for May	Total
A	$291	$184	$
B	712	697	
C	342	288	
D	164	129	
E	159	108	
F	204	271	
Total	$	$	$

b Make the extensions: [5]

33⅓ bu. @ $1.08 =

16 oz. @ 2½¢ =

36 cows @ $25 =

96 lb @ $1.12½ =

124 lb @ 75¢ =

c Compute the interest: [4]

$6000 for 91 days @ 6 % =

$ 320 for 30 days @ 4½% =

$ 128 for 15 days @ 3 % =

$ 500 for 4 mo. @ 2 % =

d The number of yards that can be bought for: [2]

$15 @ 33⅓¢ =

$60 @ 62½¢ =

e Complete *each* of the following: [5]

⅓% of $630 is ....

40 increased by 20% of itself is ....

36 divided by 1.8 is ....

.05 × 4.8 equals ....

$50 per ton is equivalent to $........ per pound.

The University of the State of New York

275TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, June 20, 1939 — 9.15 a. m. to 12.15 p. m., only

Write at top of first page of answer paper (*a*) name of school where you have studied, (*b*) number of weeks and recitations a week in business arithmetic.

The minimum time requirement is five recitations a week for a school year.

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 By selling a car for $1500, a man lost $300. What per cent of the cost of the car did he lose?

   b An investor pays $80 for a $100 bond bearing interest at 5%. What will be the rate of income on his investment?

   c If the tax rate in a certain city is $25.40 per $1000, what amount of tax must be paid on property assessed at $8000?

   d Find the single discount equivalent to a series of discounts of 20%, 12½% and 5%.

   e An automobile that cost $630 four years ago can be traded in today for $150. What is the average annual depreciation?

4 On April 1, 1938, Brown deposited $500 in his savings bank. The interest rate is 1½% per annum and the bank adds the interest to the depositors' accounts on April 1 and October 1 of each year. On April 1, 1939, Brown had to pay the semiannual interest at the rate of 5% per annum on a $3500 mortgage on his home. He withdrew the necessary amount from his savings account to make this payment.

   a How much did Brown have on deposit in the savings bank on April 1, 1939, before making the withdrawal? [5]

   b What was his bank balance after the withdrawal? [5]
   [OVER]

5 Mrs Bush, who conducts a ladies' apparel shop, has fixtures valued at $1000 and a stock of merchandise valued at $4500. She has the fixtures and stock insured at 80% of their value, paying 30¢ a hundred for one year on the fixtures and $1.80 a hundred for three years on the stock.

   a Find the premium on the fixtures. [4]

   b Find the premium on the stock. [4]

   c Find the total yearly cost of insurance. [2]

6 Henry Clark is paying $35 a month rent for a one-family house. He can purchase the house for $4900 by paying $490 cash and giving a mortgage at 5% for the remainder. The estimated annual expenses that he would have as an owner are: taxes $125, water charge $25, repairs $50, insurance $9. If he can earn 2% on his money by investing it in government securities, will it be cheaper to buy or to rent, and how much? [10]

7 Smith wishes to purchase a car which sells for $756 cash. However, if he buys it on the installment plan, the dealer wants a down payment of $300 and the remainder in 12 equal monthly installments of $42.64 each. According to either plan, the dealer will allow Smith $200 for his used car to be applied on the down payment.

   a How much money will be paid if the car is bought for cash? [2]

   b What will be the total amount of cash paid if the car is bought on the installment plan? [4]

   c By what per cent will the amount of cash paid on the installment plan exceed the amount of cash paid on the cash plan? [4]

8 The Acme Sales Company conducted a contest for its salesmen. Potter's average sales for the last nine weeks of 1938 were $379.65. For the first four weeks of 1939 his sales amounted to $376.14, $625.32, $429.53 and $374.52 respectively. Find Potter's average weekly sales for the 13 weeks. [10]

9 A commission merchant was ordered by a confectioner to purchase 275 bags of sugar, each containing 100 pounds. The commission merchant purchased the sugar at 3.5 cents a pound and charged 4% commission. He paid the freight at the rate of 53 cents a bag and a handling charge of $32.50.

   a Find the total cost of the sugar to the confectioner. [8]

   b Find, to the nearest tenth of a cent, the cost to the confectioner of a pound of sugar. [2]

10 Peter Small submitted the following facts on his New York State income-tax blank for the year 1938: salary for the year $4500; interest on savings account $48; profit on sale of stocks $75. The law entitles him to an exemption of $2500 as a married man and $400 for a dependent son. He is also permitted to deduct his contributions to church and community chest, which total $65. What will be the amount of his normal income tax if the rate is 2% on the first taxable $1000 and 3% on the next taxable $1000? [10]

11 Write the letters *a, b, c, d, e* on your answer paper. After *each* letter write " True " if the corresponding statement is true; if the statement is false, write the amount that should be substituted for the underscored amount to make the statement correct. [Deduct 2 credits for each incorrect answer.] [10]

    a The net price of a refrigerator listed at $130, less 20% and 5%, is $98.80.

    b On November 20, $245 should be accepted in full payment of a bill for $250 worth of goods bought October 18 at the following terms: $4/_{10}$ $2/_{30}$ $n/_{60}$.

    c If a dealer bought belts at $15 a dozen and sold them for $2 each, his rate of gain on the selling price was $37\frac{1}{2}\%$.

    d In computing the discount on a note the exact number of days from November 25, 1938 to March 1, 1939 is 95.

    e If the selling price of an article is $540 after a discount of 10% from the list price has been given, the list price of the article must have been $620.

12 On June 1, James Scribner received his bank statement, which showed a bank balance of $127.89. His check-book balance on that date was $82.50. On comparing the statement with the checkbook, Scribner found that the following items had not been recorded in the checkbook: a canceled check for $15.92, a deposit of $21.36, and a service charge of $1. The following checks were outstanding: $20.00, $4.95, $16.00.

    a Reconcile the balances. [8]

    b On the reconciliation statement that you have prepared, indicate clearly the amount that represents the correct checkbook balance. [2]