The University of the State of New York

286TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, January 19, 1943 — 9.15 a. m. to 12.15 p. m., only

Fill in the following lines:

Name of pupil..Name of school..

Instructions

Do not open this sheet until the signal is given.

All parts of the rapid calculation test are to be worked mentally and the results placed on the question paper. 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.

RAPID CALCULATION TEST

1–2 Complete the following sales record: [5]

	November	December	Total
Andrews	$ 95	$145	
Bryan	169	231	
Carver	325	184	
Johnson	432	269	
Neff	242	635	
Wilson	348	142	
Total			

b Make the extensions: [5]

325 yd @ 20¢   =

180 lb. @ 3⅓¢   =

125 gal. @ $1.20 =

240 ft   @ 83⅓¢ =

150 bu. @ 75¢   =

c Compute the interest on *each* of the following: [5]

$ 328 for 15 days at 6 % =

$ 175 for 66 days at 6 % =

$ 320 for 3 mo. at 4 % =

$1200 for 50 days at 3 % =

$ 240 for 20 days at 4½% =

d Underline the correct answer for *each* of the following: [5]

¼% of $920 is ($.23 ; $2.30 ; $23 ; $230)

36 is 150% of (18 ; 24 ; 27 ; 54)

.00375 expressed as per cent is (⅜% ; 3¾% ; 37½% ; 375%)

4.8 divided by 1.2 is (.04 ; .4 ; 4 ; 40)

80 is ¼ more than (20 ; 60 ; 64 ; 100)

BUSINESS ARITHMETIC

Tuesday, January 19, 1943

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] [Two credits for each correct answer; no partial credit. Answers only are required in this question.]

  a A government war bond bought today for $18.75 will be worth $25 when it matures in 10 years. How much must we invest today in these bonds in order that their maturity value will be $1500?

  b Martin insured a building valued at $12,500 for 80% of its value at 75¢ per $100 for three years. What was the amount of the premium?

  c What is the rate of profit on the selling price for the grocer who sells a pound package of cheese for 36¢, if it costs him 24¢ per pound?

  d The tax rate in Georgetown is 27.5 mills per dollar of assessed valuation. Find the tax to be paid on property assessed at $6450.

  e An adding machine cost $150 and has been in use for 5 years. It is now worth $37.50. What is the average annual depreciation?

4 A dealer purchases Ranger bicycles for $32.50, less 20% and 5%, plus a freight charge of 90¢ on each bicycle. If he computes his cost of doing business at 24% of sales, for how much must he sell each bicycle in order to make a profit of 12% of the selling price? [10]

5 The Domestic Rug Company received an invoice of rugs on November 10, amounting to $1280, terms $^3/_{10}$ $^n/_{60}$. To obtain the necessary funds, on November 20 the company discounted at 6% a customer's 60-day non-interest-bearing note for $1251 dated October 31.

  a For how much did the company write their check to pay the invoice on November 20? [2]

  b Find the net proceeds of the discounted note. [6]

  c What was the net saving the company made by discounting the note and paying the invoice on November 20? [2]

6 Wilson, a commission merchant, received from Powers 1500 bushels of potatoes. He sold 635 bushels at $1.40, 475 bushels at $1.38 and the remainder at $1.35 a bushel. He remitted the net proceeds to Powers after deducting his commission of 5%, freight charges of $84.50, sorting and weighing expense of $37.65 and storage charges of 3¢ a bushel. What was the amount of the net proceeds remitted? [10]

7 On December 1, George Elliott's bank statement showed a balance of $718.54. His checkbook balance was $672.40. The following items appeared on the bank statement but not in the checkbook: $56 note collection, $1.78 service charge. A deposit of $135.75 made on November 30 appeared in the checkbook but not on the bank statement. The following checks were outstanding: $46.50, $24.58, $17.65, $38.94.

  a Prepare a reconciliation statement. [8]

  b On the statement indicate the correct checkbook balance. [2]

[OVER]

8 A worker is paid a regular wage of 70¢ an hour for eight hours a day from Monday through Friday with time and a half for overtime on those days and double time for work on Saturday and Sunday. During one week he worked nine hours each day, Monday through Sunday.

a Find his earnings for the week. [8]

b Ten per cent of his earnings were deducted for the purchase of war bonds and one per cent for social security taxes. How much money did the worker receive? [2]

9 Vincent, Dugan and Carver have invested $6000, $8000 and $12,000, respectively, in their wholesale business. The first year their net profit was $7800.

a If they decided to divide their profits equally among themselves, how much would Dugan receive? [1]

b If they divided their profits in proportion to their investments, how much would Dugan receive? [3]

c If they allowed each partner 6% interest on his investment and then divided the remaining profit equally, how much would Dugan receive? [6]

10 Gates can borrow $240 from his bank, repaying the loan in five monthly payments of $49.40 each. He can borrow the same amount from a credit union, of which he is a member, repaying the loan in five monthly payments of $48 each plus interest at $\frac{3}{4}$% per month on the unpaid balance.

a How much interest would Gates pay the bank for the loan? [2]

b How much interest would he pay the credit union? [In your solution show the interest to be paid each month.] [6]

c From which loan institution would it be better to borrow? How much better? [2]

11 Johnson has $6800 available for investment. If he invests this amount in a house, it will return him $65 rent each month. Expenses including taxes, insurance and repairs are estimated to be $355 annually. He can invest the $6800 in preferred stock at $136 per share (including brokerage fee), each share of stock paying him quarterly dividends of $2. He can invest the money in bonds (par value $1000), each bond costing him $850 (including brokerage fee) and bearing interest at $4\frac{1}{2}$% annually.

a Find Johnson's annual net income if he invests in the house. [2]

b Find his annual income if he invests in preferred stock. [4]

c Find his annual income if he invests in bonds. [4]

12 Bell's electric meter read 9827 kw-hr on December 10 and 9890 kw-hr on January 10. The electricity rates were as follows: the first 15 kw-hr for $1; the next 30 kw-hr at 5¢ a kw-hr; the remaining kw-hr at 4¢ a kw-hr. Find Bell's electric bill for the period given, if he took advantage of a 1% cash discount. [10]