The University of the State of New York

292D HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Wednesday, August 23, 1944 — 8.30 to 11.30 a. 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.

This is a mental test — scrap paper may not be used.

RAPID CALCULATION TEST

1–2 *a* Add: [4]

6479
5789
2865
4377
2894
6135
8758
6476
5437
3685
2859
5678
6797
4873
6397

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

$250 for 30 days at 6 % =

$540 for 12 days at 5 % =

$420 for 24 days at $4\frac{1}{2}\%$ =

$625 for 60 days at $1\frac{1}{2}\%$ =

c Make the extensions: [4]

385 bu. @ $1.20 =

660 yd @ $.66\frac{2}{3}$ =

240 yd @ $.87\frac{1}{2}$ =

28 gal. @ $.16\frac{2}{3}$ =

d Solve: [4]

86 + .4 =

32 — 1.25 =

6.03 × .8 =

5.49 ÷ .09 =

e Place answers in proper columns: [4]

Selling price	*Cost*	*Gain*	*Rate of gain on selling price*	*Rate of gain on cost*
$400	$320	$80		
48	32	16		

BUSINESS ARITHMETIC

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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 1944 or number and length in minutes of lessons taken in the summer of 1944 under a tutor licensed in the subject and supervised by the principal of the school you last attended.

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 1944 or an equivalent program of tutoring approved in advance by the Department 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] [Two credits for each correct answer; no partial credit. Answers only are required in this question.]

a A man saved $750, which was 3% of his salary. What was his salary?

b Machinery that cost $40,000 was valued at the end of 7 years at $5000. What was the average annual depreciation?

c A jeep was driven 6 miles in 9 minutes. What was its speed per hour?

d Find the number of days for which the bank charged discount on a two-months note dated June 21, 1944, and discounted 10 days after date.

e The tax budget for a village with 1500 inhabitants was $24,568. Find, correct to the *nearest mill,* the cost per person of running the village.

4 James Morris sold his stocks and purchased a building block. The block was completely rented at an annual rental of $16,200. The annual expenses were taxes $1235, insurance $75, janitor's salary $1500 and miscellaneous expenses $1300. How much did he pay for the building if he made 6% on his investment? [10]

5 The invoice price of a floor lamp was $7.65 and the freight charge was 33 cents. The lamp was marked by a local dealer so as to make a net profit of 25% on the selling price after he had allowed a trade discount of 20% and a cash discount of 5%.

a Find the net selling price. [4]

b Find the marked price. [6]

6 At the opening of their spring season, a men's furnishings store bought neckties at $7.50 a dozen, less 33⅓% and 10%. At what price *each* must he sell them to make a profit of 20% on the net cost if he makes an allowance of 10% of the selling price for leftover stock at the close of the season? [10]

7 Brown & Company's bank statement for July 1944 showed the following: balance July 1, $8453.21; deposits: July 10, $643.50; July 17, $287.43; July 24, $59; checks paid: July 3, $75.46; July 6, $187.45; July 13, $587.23; July 20, $1467.50; July 28, $627; balance July 31, $6498.50. The checkbook balance was $5362.25.

The bookkeeper, when checking the checkbook stubs, found that the check for $627 had been entered as $672 and two checks, for $48 and $1043.25, had not been paid.

a Prepare a bank reconciliation statement. [8]

b On the statement that you prepared, indicate the correct checkbook balance. [2]

8 On July 1, 1943, Robert Sampson, James Graham, and Charles Toohey formed a partnership to conduct a mercantile business and invested $8000, $10,000 and $12,000, respectively. On July 1, 1944, the statements showed that their gross profits were $15,410 and their expenses were $3800. The partnership agreement provides that gains and losses are to be shared in proportion to the investments.

a What would be Sampson's share of the gain? [4]

b If each partner received 6% interest on his investment and then shared profits equally, what would be Sampson's share of the profits? [6]

9 James Monroe earns $72 a week. It costs him 35% of his salary for board and room, 10% for clothing, 6¼% for advancement, and 12½% for incidentals. The company deducts 2¼% of his salary for hospitalization and group insurance, and 10% for war bonds. He carries an annuity policy for which he must save $2.28 each week in order to pay the premium when due. The remainder he is saving to purchase an extra $500 E bond for $375. For how many weeks must he save? [10]

10 A house is valued at $12,000 and its contents for $4500. The house is insured for 75% of its value at 50¢ per $100 for three years. The contents are insured for the full value at an annual rate of 35¢ per $100.

a What was the amount of the premium paid for insuring the house? [4]

b Find the total annual cost of carrying both insurance policies. [6]

11 James Morgan receives a gift of $1000 when he is 17 years old.

a Assume that he invests the $1000 at 3%. How much interest would be earned the first year? [1]

b Assume that the principal and the interest are invested each year at 3%. How much more interest would be earned the second year than the first year? [1]

c Assume that the principal and the interest are always invested at 3%. If money at this rate doubles itself in 24 years, how much will the fund amount to when James Morgan is 65 years old? [2]

d What will be the income for a year when Morgan is 65 years old? [2]

e Morgan retires in May at 65 years of age and draws the interest each year thereafter on the accumulated amount found in answer to *c*. How much interest will he have drawn when he dies in May at 75 years of age? [2]

f What amount will his wife receive after his death if he wills her the principal? [2]

12 *a* Mr Roberts borrowed $100 on a note. The lender subtracted 4% in advance and made a service charge of $2. The amount borrowed was repaid in 10 monthly payments of $10 each. What rate of interest did he pay for the time borrowed? [5]

b Mr Jordan borrowed $100 from a loan company. He repaid the loan in 10 monthly instalments of $12 each. What rate of interest did he pay for the time borrowed? [5]