The University of the State of New York

307TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, August 23, 1949 — 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 *answers only* 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 answers must be written with pen and ink.

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

1–2 *a* Underscore the correct answer for *each* of the following: [6]

25% expressed as a fraction in its lowest terms is (.25; $\frac{25}{100}$; $\frac{1}{4}$; $\frac{3}{4}$)

$\frac{1}{10}$ of 864 is (.864; 8.64; 86.4; 8640)

$\frac{3}{4}$% of $1600 is ($1.20; $12.00; $120; $1200)

60 is 20% less than (12; 48; 75; 80)

An article costing $30 sells for $36. The per cent of gain based on the selling price is ($16\frac{2}{3}$%; 20%; $83\frac{1}{3}$%; $116\frac{2}{3}$%)

The number of pounds that can be bought for $30 at $1.50 per pound is (10; 15; 20; 45)

b Make the extensions: [5]

42 bu. at $.33⅓ per bu. = $

750 lb. at $4 per cwt = $

40 yd at $.15 per yd = $

90 bu. at $1.50 per bu. = $

10 oz. at $.32 per lb. = $
(avoirdupois)

c Compute the interest: [5]

$200 for 9 days at 6% = $

$540 for 30 days at 2% = $

$300 for 2 months at 5% = $

$60 for 178 days at 6% = $

$2400 for 20 days at 1½% = $

d Complete the following table of college registration: [4]

	Men	Women	Total
Liberal Arts	449	416	
Fine Arts	387	395	
Teachers' College	320	297	
Totals			

[2]

BUSINESS ARITHMETIC

Tuesday, August 23, 1949 — 8.30 to 11.30 a. m., only

Answer questions 1–2 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown written in ink. 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 Ainslee, a bankrupt, has liabilities of $17,850. The cash available for his creditors is $12,673.50. How much will be paid to a creditor with a claim of $650?

    b A watch marked at $70 is subject to a 20% Federal tax on the marked price. What price must a customer pay for this watch?

    c A 90-day promissory note is dated April 21. What is its due date?

    d A salesman charged $56 for selling goods priced at $800. What per cent of commission did he charge?

    e A chair marked at $62.50 is sold for $48.50. What is the per cent of discount allowed, correct to the nearest *whole* per cent?

4 *a* Landis buys merchandise for $3200 less 25% and $16\frac{2}{3}$%. What single rate of discount is equal to the series of discounts he receives? [2]

    b If terms of 2/10, n/30 are offered, what amount of money is needed to pay the bill within 10 days? [4]*

    c If Landis borrows the necessary funds to pay the bill and take advantage of the cash discount, what interest will he be charged, if the loan runs for 30 days at 6%? [4]*

5 King, a salesman, is offered his choice of two positions. The Ellery Corporation offers him a salary of $60 per week, and 10% commission on all sales in excess of $400. The Vaughan Company will pay him 10% on all sales up to and including $300, and 15% on all sales in excess of that amount. King accepts the offer of the Ellery Corporation. The sales he makes during his first week of work total $550.

    a What amount did he earn for his first week with the Ellery Corporation? [4]*

    b If King had accepted the offer of the Vaughan Company, and had been able to make the same amount of sales, what would his earnings have been? [6]*

6 Albertson and Clark are partners in a retail clothing business, with investments of $9000 and $6000 respectively. In 1948 they bought merchandise for $56,000 and sold the entire stock at an average markup of 25% of the cost. Their expenses were:

Rent	$1200
Light	750
Salaries	5025
Advertising	375
Miscellaneous	650

Profits and losses are to be shared in proportion to the partners' investments.

    a What were the total sales made by the firm during 1948? [2]

    b What was the firm's net profit for 1948? [4]*

    c What amount of money did Albertson receive as his share of the net profit for 1948? [4]*

[3] [OVER]

7 Avery, a furniture dealer, bought 60 rugs at $55 each. He sold 25 of them at $82 each, and 30 at $65 each. At what price must he sell the remaining rugs in order to gain 30% on the cost of all of the rugs? [10]*

8 *a* Croshier's office building is insured for $25,000 at an annual rate of $.22 per $100. If a three-year policy costs 2½ times as much as a one-year policy, how much would Croshier save by buying a three-year policy instead of three one-year policies? [4]*

b On July 1, 1947, Stewart deposited $1500 in a savings bank paying interest at the rate of 2% per year. Interest is figured and added to the account every six months. If he made an additional deposit of $500 on January 2, 1948, and made no withdrawals at all during the entire time, how much did Stewart have on deposit on January 2, 1949? [6]*

9 *a* Stanton owned a house with an assessed valuation of $8500, and two lots assessed at $650 each. The tax rate in his community last year was $33.80 per $1000. What was the total amount of the tax that Stanton paid on his house and two lots for 1948? [4]*

b When Richards figured his 1948 New York State income tax, he found that his net taxable income, after he had made all deductions, was $2560 for that year. This net taxable income was subject to a tax of 2% on the first $1000, and 3% on the next $2000 or any part thereof. There was a deduction of 10% of the total tax allowed before payment. What amount of money did Richards pay as New York State income tax? [6]*

10 Rollins bought 60 shares of preferred stock at $85.50 per share, including brokerage and other expenses. He kept this stock for a year, during which time he received two semi-annual dividends of $3.50 per share each. At the end of that time, he sold the stock and received $93 per share after brokerage and other expenses had been deducted. What was the total amount Rollins gained by owning and selling this stock? [10]*

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

a A typewriter costing $120 when new is worth $40 after eight years of use. The average annual depreciation is $10.00.

b Henderson works on a 40-hour week, with time-and-a-half for overtime. During a recent week he worked 48 hours. He will be paid for 56 hours of regular work.

c Dalton's bank statement showed a balance of $973.48. His checks outstanding were for $117.31; $65.40; $82.17. Dalton's available bank balance was $708.60.

d A radio may be purchased for $80 cash, or for $26 down and 7 monthly installment payments of $10 each. The installment price exceeds the cash price by 20%.

e On both Monday and Tuesday, Harold received a mark of 85% in arithmetic. On Wednesday, Thursday, and Friday he received marks of 75%, 90%, and 80%, respectively, in the same subject. His average mark for the five days was 82.5%.

12 Answer *all* parts of this question. [10] [One credit for each correct answer; no partial credit; no credit allowed unless work is shown. Reduce each answer to its simplest form.]

a Add 10.73; 902.1; 5.784; .296

b Subtract 12.17 from 31.9

c Divide 75.6 by 180

d Add 1⅗; 4⅓; 3½

e Using the four-step process, multiply 26⅔ by 6½

f Divide 3⅑ by 2⅔

g Change 3 lb. 7 oz. to ounces (avoirdupois)

h Multiply 9.08 by 22.9

i Subtract 9¼ from 17⅕

j Express $\frac{5}{11}$ as a per cent correct to the *nearest tenth* of a per cent.

* To the teacher: One-half the number of credits should be deducted for each different error in method. [No credit should be allowed for a solution that contains an error in method and an error in computation.]

[4]