

The University of the State of New York
319TH HIGH SCHOOL EXAMINATION
BUSINESS ARITHMETIC

Thursday, August 20, 1953 — 8.30 to 11.30 a. m., only

Fill in the following lines:

Name of pupil Name of school.....

Instructions for Part I

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.

Scrap paper may not be used, nor may computations be made on the question paper.

Part I

RAPID CALCULATION TEST

1-2 a Make the extensions: [5]

84 yd. at 25¢ per yd. = \$ _____
 16 qt. at \$2 per gal. = \$ _____
 75 bu. at 48¢ per bu. = \$ _____
 16 ft. at \$2.12½ per ft. = \$ _____
 350 lb. at \$4 per cwt. = \$ _____

b Compute the interest: [5]

\$390 for 60 days at 3% = \$ _____
 \$5400 for 10 days at 2% = \$ _____
 \$2186 for 6 days at 6% = \$ _____
 \$30 for 274 days at 6% = \$ _____
 \$800 for 1 month at 1½% = \$ _____

c Underscore the correct answer for each of the following problems: [6]

If an article costing \$30 is sold for \$40, the per cent of gain, based on the cost, is (75%; 33½%; 25%; 10%).

2% of \$820 is (\$1640; \$820; \$16.40; \$8.20).

33½% more than 27 is (9; 18; 36; 81).

18.0957 expressed as a decimal to the nearest tenth is (18.0; 18.1; 18.10; 18.096).

387.24 multiplied by 10 is (3.8724; 38.724; 3872.4; 38,724).

.28, expressed as a fraction in lowest terms, is ($\frac{56}{200}$; $\frac{28}{100}$; $\frac{14}{50}$; $\frac{7}{25}$).

d Complete the following table of shipments made: [4]

<i>Method of Shipment</i>	<i>Packages of Furniture</i>	<i>Packages of Hardware</i>	<i>Totals</i>
Freight	312	189	
Express	157	406	
Parcel Post	77	1251	
<i>Totals</i>			

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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 1953 or number and length in minutes of lessons taken in the summer of 1953 under a tutor licensed in the subject and supervised by the principal of the school you last attended.

The minimum time requirement is four or 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 (four 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 1953 or an equivalent program of tutoring approved in advance by the Department is required.

Answer questions 1-2 in Part I, four questions from Part II, four questions from Part III and four questions from Part IV. Unless otherwise stated, all operations except mental ones are to be shown written in ink. Practical business methods must be used in solutions.

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

Part II

Answer any four questions from this part.

3 Answer all parts of this question. [Two credits for each correct answer; no partial credit. ALL WORK MUST BE SHOWN.] [10]

- a In 1951, Jackson spent \$865 for insurance. In 1952, he spent 18% more. How much did he spend for insurance in 1952?
- b In preparing a set of plans, a draftsman used a scale of $\frac{1}{8}$ " to 1'. How great a distance would be represented by a line $3\frac{1}{4}$ " long?
- c Colton can buy an oil burner for \$920 cash or, on the installment plan, by making a down-payment of \$200 and paying the balance in 12 equal installments of \$69.20 each. By what amount of money does the installment price exceed the cash price?
- d Jones insured his furniture for \$4000 for three years. The rate for the entire 3-year policy was 81¢ per \$100. What premium did he pay for this policy?
- e An invoice for \$1800, terms $\frac{3}{10}, \frac{1}{30}, N/60$, is dated June 23. What amount of money is needed to pay this invoice on July 19?

4 Answer all parts of this question. [This is an accuracy test. One credit for each correct answer; no partial credit; no credit allowed unless work is shown. Wherever necessary, reduce the answer to simplest form.] [10]

- a Add: 863.12; 91.08; 3.749; .265
- b Subtract 116.04 from 842.1
- c Divide 88.305 by 1.05
- d Multiply 472.1 by 3.48
- e Multiply $27\frac{1}{4}$ by $8\frac{1}{3}$
- f Add: $7\frac{1}{8}$; $3\frac{1}{4}$; $11\frac{1}{2}$; $4\frac{1}{3}$
- g Divide $4\frac{2}{3}$ by $1\frac{2}{3}$
- h Subtract $9\frac{3}{4}$ from $29\frac{5}{8}$
- i Express .5% as a common fraction in lowest terms.
- j Add 5 yd. 2 ft. 7 in. and 12 yd. 1 ft. 9 in.

[3]

5 Fisher, a wholesale vegetable dealer, bought 280 bushels of potatoes at \$4.00 per bushel. 10% of these potatoes spoiled before being sold. Of those which did not spoil, Fisher sold 120 bushels at \$5.00 per bushel, 75 bushels at \$5.20 per bushel, and the remainder at \$5.40 per bushel. Fisher's operating expenses in connection with the transaction were \$67.45. What amount of net profit did Fisher make on the entire transaction? [10]*

6 On July 1, Fulton's bank balance was \$1387.42. In order to obtain additional funds to pay bills totaling \$2429.63, he discounted at the bank on that date his own 30-day note payable for \$1200. The rate of discount charged by the bank was 6%. The proceeds obtained from discounting this note were added to Fulton's bank account. What amount of money remained in his account after he discounted the note and paid the bills? [10]*

7 Haskins, a salesman, is paid a salary of \$70 per week and a 15% commission on all sales in excess of a weekly quota of \$1200. During a recent four-week period Haskins' sales were as follows:

First week	\$1390
Second week	\$1750
Third week	\$1140
Fourth week	\$1620

What average amount of money per week did Haskins earn from both salary and commission? [10]*

Part III

Answer any four questions from this part.

8 Jackson is employed on a 40-hour-per-week basis, with time-and-a-half for all overtime. His pay rate is \$1.80 per hour. During a recent week he worked 54 hours. If the total deductions taken from his pay for withholding tax and other items amounted to \$21.65, what amount of money did Jackson receive as "take-home" pay? [6]*

9 Farrington owned a house and lot assessed at \$9600. The tax rate on this property was \$31.20 per \$1000. The community in which this property was located offered a discount of 2% on all tax bills paid in full before January 15. What amount of money did Farrington need in order to pay his real estate tax bill and take advantage of the discount? [6]*

10 Booth insured his store building, valued at \$80,000, for \$48,000 under a policy which contained an 80% coinsurance clause. A fire loss of \$28,000 occurred. How much should Booth collect from the insurance company? [6]*

11 On July 1, 1953, Lowery's checkbook showed a balance of \$789.20. The balance on his bank statement was \$926.84. Checks outstanding were as follows: #71 for \$90.00; #72 for \$15.60; #74 for \$51.84. Upon comparing his canceled checks with their stubs, Lowery discovered that no stub had been written for check #68 for \$19.80. Prepare a reconciliation statement and indicate the correct available checkbook or bank balance. [6]*

12 Gaynor's electric meter read 3412 kilowatt-hours on July 1 and 3586 kilowatt-hours a month later. His electric bill for that month was \$9.20. What was the average price per kilowatt-hour which Gaynor paid for electricity during July, to the nearest tenth of a cent? [6]*

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Part IV

Answer any four questions from this part.

13 A refrigerator which has been selling for \$600 less 25% and 20% is to be reduced further in price to \$324. What additional per cent of discount must be given? [4]*

14 The furniture in an office cost \$950 when new. It is estimated that this furniture will depreciate at the rate of 8% per year. What would be the estimated value of this furniture at the end of 4 years of use? [4]*

15 Collins and Dawson are partners in business, with investments of \$18,000 and \$12,000 respectively. Their profits are to be shared in proportion to their investments. Last year the firm made a profit of \$10,210. What was the amount of Collins' share of this profit? [4]*

16 Andrews, a bankrupt, owed debts totaling \$46,400. The net cash available for paying his creditors amounted to \$10,672. What amount of money would be paid to a creditor with a claim of \$5800? [4]*

17 Carlson bought some stock at a total cost of \$75 per share, including brokerage and other expenses. He received an annual dividend of 6% on a par value of \$100. What actual per cent of return did he receive on his investment? [4]*

* [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.]