

The University of the State of New York

310TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Thursday, August 24, 1950 — 8.30 to 11.30 a. m., only

Fill in the following lines:

Name of pupilName 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.

RAPID CALCULATION TEST

1-2 a Subtract: [2]

$$\begin{array}{r} 963 \\ 18\frac{5}{8} \\ \hline \end{array}$$

b Make the extensions: [5]

- 195 bu. at 20¢ per bu. = \$
- 650 lb. at \$3 per cwt. = \$
- 4 yd. at 50¢ per ft. = \$
- 5000 lb. at \$18 per ton = \$
- .25 bu. at \$1.60 per bu. = \$

c Compute the interest: [5]

- \$690 for 60 days at 2% = \$
- \$500 for 9 days at 6% = \$
- \$60 for 38 days at 3% = \$
- \$800 for 30 days at 4½% = \$
- \$720 for 10 days at 5% = \$

d Complete the following statements: [4]

- ¾% of \$780 is \$.....
- .847 expressed to the nearest whole per cent is %.
- An article marked at \$80 is sold for \$60. The per cent of discount given is %.
- 25% less than 76 is

e Complete the following summary of departmental sales: [No partial credit] [4]

<i>Department</i>	<i>January</i>	<i>February</i>	<i>Totals</i>
A	\$3864	\$2779	
B	2982	2165	
C	3027	2419	
<i>Totals</i>			

BUSINESS ARITHMETIC

Thursday, August 24, 1950 — 8.30 to 11.30 a. m., only

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 1950 or number and length in minutes of lessons taken in the summer of 1950 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 1950 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 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. [Two credits for each correct answer; no partial credit. Answers only are required in this question.] [10]

a What single per cent of discount is equal to a series of 25% and 20%?

b In September 1948, Central High School had a total enrollment of 1080 students. In September 1949, its total enrollment was 1242. What was the per cent of increase in enrollment?

c The total assessed valuation of all taxable property in the village of Dale was \$2,340,500. The tax to be raised for the village budget amounted to \$79,249.33. What tax rate per \$1000 would need to be levied to raise the desired tax?

d A bookcase is marked to sell at \$180 less 33 $\frac{1}{3}$ %. What additional per cent of discount must be given to mark the desk down to sell for \$105?

e On January 2, 1949, Jones deposited \$1500 in a savings bank, which pays interest at the rate of 2% per year, compounded semi-annually on July 1 and December 31. What was the amount of money in the account on January 2, 1950?

4 Davies bought 1250 lb. of coffee through a commission merchant. The merchant paid 62¢ per lb. for 550 lb., and 67¢ per lb. for the remainder. He charged Davies 7% commission on the purchase price. Trucking and other expenses amounted to \$11.85. What was the average total cost per pound which Davies paid for the coffee? [Answer to the nearest tenth of a cent.] [10]*

5 a A delivery truck costing \$2450 when new is worth \$294 after eight years of use. What was the average annual per cent of depreciation on the truck? [4]*

b The balance in Allen Kellogg's checkbook on August 1, 1950, was \$2106.76. The bank statement he received on that date showed a balance of \$2186.19. Checks outstanding were as follows: \$78.14; \$201.29; \$50.00. It was found that a deposit of \$250.00 had been entered twice in the checkbook by error. Reconcile these figures and indicate Kellogg's correct available checkbook or bank balance. [6]*

6 a Wyatt, a salesman, is paid a salary of \$30 per week and 5% commission on all weekly sales in excess of \$450. During a recent week his sales amounted to \$830. What were Wyatt's total earnings for that week? [4]*

b Fisher works on a 40-hour-per-week basis, at \$1.10 per hour, with time-and-a-half for overtime. During a recent week he worked 44 hours. Deductions made from his total pay were as follows:

Federal Old Age Benefit and withholding tax	\$8.45
Community Chest deduction	.25
Group insurance and hospitalization	.87

What amount of money did Fisher receive after all deductions had been made? [6]*

[3]

[OVER]

- 7 *a* Roberts purchased a share of 6% preferred stock, with a par value of \$50, for a total cost of \$60 including brokerage and other expenses. What actual per cent will he earn on his investment? [4]*
- b* Carter's electric meter read 11,386 kw-hr on May 1 and 11,492 kw-hr on June 1. The electricity rates he paid were:
 The first 20 kw-hr for a total price of \$1.20
 The next 40 kw-hr for \$.05 per kw-hr
 The remaining kw-hr for \$.04½ per kw-hr
 What was Carter's electric bill for the month of May? [6]*
- 8 Kelsey, an office equipment dealer, bought a desk for \$98 less 20%. He also paid freight charges of \$6.60. If his overhead expenses averaged 17% of sales, at what price should he sell the desk in order to make a net profit of 15% of the selling price? [10]*
- 9 *a* Walsh insured his store building for \$30,000 with the Zenith Insurance Company and for \$18,000 with the Acme Insurance Company. If a fire loss of \$20,000 occurred, what amount of money would Walsh receive from the Zenith Insurance Company? [4]*
- b* Andrews insured his house, valued at \$24,000, for \$16,000 under a policy which contained an 80% co-insurance clause. A fire loss of \$8400 occurred. What amount of money would Andrews collect from the insurance company? [6]*
- 10 Write the letters *a, b, c, d, e* in a column on your answer paper. After *each* letter write *true* if the corresponding statement below is correct; if the statement is false, write the *amount* that should be substituted for the underscored amount to make the statement correct. [Two credits will be deducted for each incorrect answer.] [10]
- a* A two-month promissory note dated May 17 is discounted at the bank on June 26. The bank discount charge will be for 21 days.
- b* John's daily test marks in a certain subject were 80%, 92%, 90%, and 92% for the first four days of the week. To maintain an average of 90% for the entire five-day week, his test mark on the fifth day must be 94%.
- c* 7 yards 2 feet 5 inches equals 281 inches.
- d* An article costing \$36 is sold for \$45. The per cent of gain based on the cost is 20%.
- e* An invoice for \$750, dated June 29, has terms of $\frac{2}{10}, \frac{1}{30}, N/60$. If this invoice is paid on July 7, the net amount paid will be \$735.
- 11 Answer *all* parts of this question. [One credit for each correct answer; no partial credit; no credit allowed unless work is shown. Reduce each answer to simplest form.] [10]
- a* Add 64.09; 52.371; .807; 312.76
- b* Subtract 87.64 from 119.4
- c* Divide 3.4752 by 36.2
- d* Add $5\frac{1}{2}$; $17\frac{2}{3}$; $\frac{5}{8}$; $10\frac{3}{4}$
- e* Using the four-step process, multiply $16\frac{1}{3}$ by $9\frac{5}{8}$
- f* Divide $8\frac{1}{8}$ by $1\frac{3}{4}$
- g* Express $\frac{4}{9}$ as a decimal correct to the *nearest thousandth*.
- h* Multiply 16.5 by 8.07
- i* Subtract $2\frac{2}{3}$ from $21\frac{1}{5}$
- j* Express 38.5% as a common fraction in lowest terms.
- 12 Using the title and information given below, prepare a curve or broken-line graph to show the facts. [To the teacher: deduct one credit for *each* error or omission.] [10]

AVERAGE DAILY TEMPERATURES — APRIL 9—APRIL 15, 1950

Sunday	41 degrees	Thursday	44 degrees
Monday	36 degrees	Friday	50 degrees
Tuesday	27 degrees	Saturday	46 degrees
Wednesday	47 degrees		

* 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.]