

The University of the State of New York

315TH HIGH SCHOOL EXAMINATION

**BUSINESS ARITHMETIC**

Tuesday, June 17, 1952—9.15 a. m. to 12.15 p. 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.

## RAPID CALCULATION TEST

1-2 a Subtract: [2]

$$\begin{array}{r} \$37.00 \\ \underline{8.62} \end{array}$$

b Make the extensions: [4]

180 bushels at  $66\frac{2}{3}\phi$  per bushel = \$.....

420 yards at \$1.50 per yard = \$.....

$37\frac{1}{2}$  pounds at  $64\phi$  per pound = \$.....

9000 pounds at \$12 per ton = \$.....

c Compute the interest: [4]

\$810 for 60 days at 2% = \$.....

\$3200 for 45 days at 3% = \$.....

\$240 for 30 days at 7% = \$.....

\$350 for 12 days at 6% = \$.....

d Underscore the correct answer in each of the following: [6]

If an article listed at \$80 sells for \$60, the per cent of discount is (20%; 25%;  $33\frac{1}{3}\%$ ; 75%).

The exact number of days from September 11 to November 2 is (50; 51; 52; 53).

3% of \$120 is (\$360.00; \$36.00; \$3.60; \$1.20).

36% expressed as a fraction in lowest terms is ( $\frac{72}{200}$ ;  $\frac{36}{100}$ ;  $\frac{18}{50}$ ;  $\frac{9}{25}$ ).

\$2.8749 expressed to the nearest whole cent is (\$3.00; \$2.875; \$2.87; \$2.88).

48 is  $\frac{2}{3}$  of (144; 96; 72; 32).

e Complete the following summary of operating expenses: [No partial credit allowed] [4]

	<i>Dept. A</i>	<i>Dept. B</i>	<i>Totals</i>
<i>Heat and light</i>	\$ 34.86	\$ 29.43	\$
<i>Salaries</i>	262.00	238.50	
<i>Advertising</i>	86.42	91.15	
<i>Totals</i>	\$	\$	\$

[2]

# BUSINESS ARITHMETIC

Tuesday, June 17, 1952

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 time requirement is four or five recitations a week for a school year.

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 A four-months promissory note for \$750.00 bore interest at 5%. What was the value of this note on its due date?
- b A table that has been listed at \$80.00 less 25% is to be sold for \$48.00. What additional per cent of discount must be given?
- c An invoice dated March 14 has terms of  $\frac{2}{30}, \frac{N}{60}$ . What is the last possible date this invoice may be paid in order that the cash discount may be obtained?
- d A diamond ring sold for \$780.00. This selling price included a Federal tax of 20% on the original price. What was the original price before the tax was added?
- e Cregg started on an automobile trip at 8.30 a. m. and arrived at his destination at 5.45 p. m. If he spent one hour and fifteen minutes for lunch and fifteen minutes for obtaining gasoline and oil, what total time did he spend for the actual driving on the trip?

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 36.47; 189.2; 2.864; 94.55
- b Subtract 487.21 from 803.9
- c Divide 4664.88 by 11.4
- d Multiply 309.2 by 5.86
- e Using the four-step process, multiply  $48\frac{3}{4}$  by  $8\frac{1}{2}$
- f Add  $9\frac{1}{4}$ ;  $42\frac{1}{5}$ ;  $3\frac{2}{3}$ ;  $11\frac{5}{12}$
- g Divide  $11\frac{1}{5}$  by  $1\frac{3}{4}$
- h Subtract  $9\frac{7}{8}$  from 21
- i Express  $\frac{8}{9}$  as a per cent correct to the nearest tenth of a per cent.
- j Add 2 yards 1 foot 7 inches and 6 yards 2 feet 11 inches.

5 On May 1, 1952, James Horton's bank statement showed a balance of \$462.50. His check-book balance was \$554.63. Checks were outstanding for \$21.50; \$119.28; \$37.84. A deposit of \$268.75, which had been properly recorded in the checkbook, had been received by the bank too late to be entered on the statement. Along with the cancelled checks Horton found a service charge slip for \$2.00. Prepare a reconciliation statement and indicate the correct available checkbook or bank balance. [10]\*

[3]

6 Using the title and information given below, prepare a bar graph to show the following facts:  
 [To the teacher: Deduct one credit for each error or omission.] [10]

PHILLIPS TAXI COMPANY  
 Passengers Carried  
 May 18–May 24

Sunday .....	78
Monday .....	49
Tuesday .....	60
Wednesday .....	53
Thursday .....	45
Friday .....	76
Saturday .....	94

7 Barnes employed a commission merchant to sell 600 bushels of apples for him. The commission merchant sold 250 bushels at \$4.50 per bushel, 275 bushels at \$4.10 per bushel and the remainder at \$4.00 per bushel. He charged Barnes 12% commission. Freight and other expenses amounted to \$19.75. What *average price per bushel*, to the *nearest whole cent*, was remitted to Barnes by the commission merchant as net proceeds for the entire transaction? [10]\*

**Part III**

Answer any four questions from this part.

8 Sherman, a rug dealer, bought rugs for \$96 each, less 25% discount. He sold these rugs for \$105 each. What per cent of gross profit, based on the cost, did Sherman make on each rug, to the *nearest tenth of a per cent*? [6]\*

9 Carson paid \$1600 less 20% for a piece of machinery for his factory. He estimated that this machinery could be used for 16 years, at the end of which time it would have a trade-in value of \$160. What would be the estimated value of this machinery after 7 years of use? [6]\*

10 On January 2, 1950, Pearson deposited \$500 in a savings bank that paid interest at the rate of 2% per year. Interest was added to the account every six months. On July 1, 1950, Pearson made an additional deposit of \$300. How much money did he have on deposit two years after the date of his first deposit, if he made no withdrawals during those two years? [6]\*

11 Fallon insured his office building, valued at \$65,000, for \$45,500 under a policy containing an 80% coinsurance clause. A fire loss of \$5600 occurred. How much should Fallon collect from the insurance company? [6]\*

12 At the beginning of January 1951, Stanwick and Paul formed a partnership, with investments of \$35,000 and \$25,000, respectively. The partnership agreement stated that the annual net profit would be divided as follows:

Each partner was to receive 6% interest annually on his investment

The remaining profit was to be divided equally

The net profit of the firm for 1951 was \$17,850. What amount did Stanwick receive as his total share of this net profit? [6]\*

**Part IV****Answer any four questions from this part.**

13 Caldwell can buy an air conditioner on the installment plan for a total cost of \$350, by paying 40% of the cost as a down payment and the balance in equal monthly payments of \$35 each. How many months will it take him to pay for the air conditioner? [4]\*

14 In January, Howell opened a savings account and made monthly deposits of varying amounts. By the end of August, he had deposited a total of \$492.50. His deposits for the rest of the year are shown below:

September .....	\$56.50
October .....	48.00
November .....	52.75
December .....	46.25

What average amount per month did Howell save during the entire year? [4]\*

15 Garnsey owns a house and lot assessed at \$9500 and a vacant lot assessed at \$750. The real-estate tax rate in his community for 1951 was \$32.60 per \$1000. What was the total amount of Garnsey's tax bill for 1951 on this property? [4]\*

16 In January 1949, Cook purchased a share of stock for \$98, including brokerage and other expenses. During the next three years, he received annual dividends as follows:

1949 .....	\$6.40
1950 .....	7.08
1951 .....	7.10

What *average annual* per cent of return did Cook receive on his investment? [4]\*

17 Wood is employed on a 40-hour-per-week basis, with time-and-a-half for all overtime. His regular pay rate is \$1.60 per hour. During a recent week he worked 50 hours. Total deductions from his pay amounted to \$17.87. What amount of money did Wood receive as "take-home" pay for the week, after all deductions had been made? [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.]