

The University of the State of New York  
324TH HIGH SCHOOL EXAMINATION  
**BUSINESS ARITHMETIC**

Monday, June 20, 1955 — 9.15 a.m. to 12.15 p.m., only

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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

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1-2 a Subtract: [2]

$$\begin{array}{r} \$83.00 \\ 29.76 \\ \hline \end{array}$$

Ans.

b Make the following extensions: [4]

72 bushels at  $12\frac{1}{2}$  cents per bushel = \$ \_\_\_\_\_

50 gallons at 36 cents per gallon = \$ \_\_\_\_\_

3000 pounds at \$18 per ton = \$ \_\_\_\_\_

30 feet at 20 cents per yard = \$ \_\_\_\_\_

c Compute the interest: [4]

\$460 for one month at 6% = \$ \_\_\_\_\_

\$2400 for 20 days at  $1\frac{1}{2}$ % = \$ \_\_\_\_\_

\$3956 for 6 days at 6% = \$ \_\_\_\_\_

\$1800 for 40 days at 5% = \$ \_\_\_\_\_

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

$\frac{1}{8}$ % of \$4800 is (\$800; \$600; \$48; \$6).

$16\frac{2}{3}$ % less than \$420 is (\$70; \$350; \$490; \$700).

If an article costing \$60 is sold for \$80, the per cent of gain, based on the selling price, is (75%;  $33\frac{1}{3}$ %; 25%; 20%).

2 yds. 1 ft. 7 in. is equal to (91; 72; 43; 10) inches.

10% of \$798 is approximately (\$800; \$80; \$8; \$.80).

5789.2 divided by 1000 is (.57892; 5.7892; 57.892; 5789.2).

e Complete the following table of sales: [No partial credit.] [4]

<i>Salesman</i>	<i>Paint</i>	<i>Hardware</i>	<i>Total</i>
Porter	\$1096	\$1653	
Wilkins	875	929	
Young	1121	872	
<i>TOTALS</i>			

## BUSINESS ARITHMETIC

Monday, June 20, 1955

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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 What single per cent of discount is equal to a series of discounts of 20% and  $12\frac{1}{2}\%$ ?
- b In 1953, Foster earned \$7890. In 1954, he earned \$6469.80. What was the per cent of decrease in his earnings?
- c An automobile costing \$1950 when new is worth \$429 six years later. What is the amount of average annual depreciation on this automobile?
- d An invoice for \$1800, which is dated June 23, has terms of  $\frac{5}{10}$ ,  $\frac{1}{30}$ ,  $\frac{N}{60}$ . What amount of money is needed to pay this invoice on July 19?
- e An architect who was preparing a set of house plans used a scale of  $\frac{1}{4}$  inch = 1 foot. How long a line would he need to draw on these plans to indicate a distance of 14 feet?

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: 116.47; 23.004; 19.6; 7.34
- b Divide 66.96 by 1.8
- c Multiply 46.71 by 2.09
- d Add:  $5\frac{5}{14}$ ;  $16\frac{2}{7}$ ;  $9\frac{1}{2}$ ;  $3\frac{3}{4}$
- e Subtract  $9\frac{2}{3}$  from  $76\frac{2}{3}$
- f Divide  $17\frac{1}{3}$  by  $2\frac{1}{2}$
- g Multiply  $54\frac{1}{4}$  by  $8\frac{1}{3}$
- h Express  $\frac{5}{7}$  as a decimal correct to the nearest hundredth
- i Express .525 as a fraction in lowest terms
- j Express  $\frac{4}{9}$  as a per cent correct to the nearest tenth of a per cent

[3]

BUSINESS ARITHMETIC — *continued*

5 On April 8, 1954, Freer discounted at his bank a 90-day promissory note for \$800, which he had received from a customer. This note bore interest at the rate of 4% per year, and was dated March 9, 1954. The bank charged Freer 6% discount. What amount of money did he receive as net proceeds from discounting this note? [10]\*

6 Whiteley employed a commission merchant to sell 800 bushels of apples for him. The merchant sold 400 bushels for \$4.50 per bushel, 250 bushels for \$5 per bushel, and the remainder at \$5.25 per bushel. He charged Whiteley 40 cents per bushel commission. Freight, storage, and other expenses amounted to \$117.50. What average price per bushel did Whiteley receive as net proceeds for this transaction? [10]\*

7 Reynolds' New York State income-tax return for a recent year showed a total income of \$5750. Reynolds was allowed to deduct for the following:

Head of family	\$2500
Taxes paid	460
Interest on debts	45
Church and charity contributions	170

His remaining net taxable income was subject to a tax of 2% on the first \$1000 and 3% on the next \$2000 or any fraction thereof. What was the total of Reynolds' New York State income tax for that year? [10]\*

**Part III**

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

8 A merchant paid \$264 for 12 chairs. In addition, he paid freight charges totaling \$1.92 on this purchase. At what price must he sell each chair if he wishes to gain 25% profit on their total cost? [6]\*

9 Fields is employed on a 40-hour-per-week basis, with time and a half for all overtime. His regular pay rate is \$1.50 per hour. During a recent week he worked 48 hours. The following deductions were made from his total earnings:

- 2% for federal old age benefits (Social Security)
- \$9.50 for federal withholding tax
- \$.60 for group insurance

What amount of money did Fields receive as "take-home" pay? [6]\*

10 Howell and Klein are members of a partnership, with investments of \$48,000 and \$32,000 respectively. Last year's sales for the firm amounted to \$160,000. The net profit was 8% of the sales. The partnership agreement provided that profits are to be shared in proportion to the partners' investments. What is the amount of Howell's share of this net profit? [6]\*

11 Hadley purchased a fire insurance policy for \$110,000 on his office building, which was valued at \$150,000. This policy contained an 80% co-insurance clause. If a fire loss of \$48,000 occurred, what amount of money should Hadley collect from the insurance company? [6]\*

12 On April 30, 1955, Anderson's checkbook balance was \$1458. His bank statement on that date showed a balance of \$1194.65. One check, for \$89.65, was outstanding. A deposit of \$350, made by mail, had not been received by the bank in time to be added to the statement. Enclosed with the bank statement was a service charge slip for \$3, which the bank had deducted from Anderson's account. Prepare a reconciliation statement, indicating Anderson's correct available checkbook or bank balance. [6]\*

BUSINESS ARITHMETIC — *concluded*

Part IV

Answer any four questions from this part.

13 Leonard is offered a television set on the installment plan for a total cost of \$360, by paying 30% of this cost as a down payment, and the balance in 12 equal monthly payments. What will be the amount of each monthly payment? [4]\*

14 The amount to be raised by real estate taxes in a certain town is \$224,202. The total assessed valuation of all taxable property in this town is \$8,492,500. What tax rate, expressed in dollars per \$1000, would be necessary to raise the desired amount of taxes? [4]\*

15 Raleigh, a bankrupt, owed debts totaling \$26,800. The net cash which was available to his creditors was \$6432. What amount of money would be paid to a creditor with a claim of \$2144? [4]\*

16 Daley purchased some stock at a total cost of \$70 per share, including brokerage and other expenses. He received an annual dividend of 7% on a par value of \$50. What actual per cent of return did Daley receive on his investment? [4]\*

17 A furniture dealer has been offering tables for \$64 each, less 25% and  $16\frac{2}{3}\%$ . What additional per cent of discount must he offer if he wishes to reduce the net selling price of these tables to \$36? [4]\*

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\* *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.]