

The University of the State of New York

297<sup>TH</sup> HIGH SCHOOL EXAMINATION

**BUSINESS ARITHMETIC**

Tuesday, June 18, 1946 — 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**

*Do not open this sheet until the signal is given.*

All parts of the rapid calculation test are to be worked mentally and the results 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 work must be done with pen and ink.

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

## RAPID CALCULATION TEST

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1-2 a Subtract: [1]

$$\begin{array}{r} 1643 \\ 968 \\ \hline \end{array}$$

b Multiply: [2]

$$\begin{array}{r} 18 \\ 9\frac{1}{2} \\ \hline \end{array}$$

c Compute the interest: [4]

\$ 450 for 1 year at 2 % = \$

\$ 240 for 30 days at 3 % = \$

\$ 680. for 2 months at  $4\frac{1}{2}$ % = \$

\$1200 for 38 days at 6 % = \$

d Make the extensions: [4]

2 ft @ 48¢ per yd = \$

175 lb. @ \$12 per cwt = \$

125 bu. @ 60¢ per bu. = \$

200 lb. @ \$15 per ton = \$

e Complete *each* of the following: [5]

.75 divided by 2.5 equals \_\_\_\_\_

.0225 is expressed as \_\_\_\_\_%

$2\frac{1}{2}$ % of \$800 is \$ \_\_\_\_\_

.625 expressed as a common fraction in its lowest terms is \_\_\_\_\_

The number of yards that can be bought for \$60 at \$1.25 a yard is \_\_\_\_\_

f Complete the following summary of sales: [4]

Department	On Account	Cash	Total
Furniture	\$ 249	\$123	\$
Appliances	415	65	
Music	96	175	
Fixtures	174	88	
Clothing	175	135	
Totals	\$	\$	\$

# BUSINESS ARITHMETIC

Tuesday, June 18, 1946

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 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown. 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 A man sold  $\frac{3}{4}$  of his business for \$3600. At that rate, what was the total value of the business?
- b Smith's bank statement on May 31 showed his balance to be \$325.64. Checks for \$24.75 and \$96.22 were outstanding. What was his available bank balance?
- c Jones and Brown, partners, invested \$3000 and \$5000 respectively, agreeing to share the profits in proportion to their investments. If the net profit was \$4800, what was Brown's share?
- d A table was sold for \$63 after a discount of  $12\frac{1}{2}\%$  had been deducted from the marked price. What was the marked price?
- e Machinery costing \$3000 was estimated to have a life of 10 years, at the end of which time it could be sold for \$250. What was the estimated annual depreciation?

4 A dealer purchased for cash an electric refrigerator listed at \$175 less 20% and 10%, terms 2/10, net 30 days. He estimated his overhead expense at 15% of sales and allowed his salesman a 5% commission of the selling price. The refrigerator was sold for \$175, the OPA ceiling price. What was the rate of net profit on the selling price? [Answer to the nearest tenth per cent.] [10]

- 5 a Morton is considering buying a house that has been renting for \$60 a month, with the following annual expenses: taxes \$140, repairs \$165, insurance \$9. Assuming that the rent income and the expenses remain the same, how much can Morton afford to pay for the house so that he may earn 5% on his investment? [6]
- b Morton owned 40 shares of stock that cost him \$3200 (including brokerage fee). On each share he received quarterly dividends of \$1.40. What annual rate of return did he receive on his investment? [4]

- 6 a Dawson's annual fuel oil bill averaged 2000 gallons at  $9\frac{3}{8}\phi$  a gallon. He had his house insulated at a cost of \$540. Assuming that the insulation will decrease his annual fuel cost by 24%, in how many years should the reduction in fuel cost amount to the cost of the insulation? [6]
- b The cash price of a radio was \$120. Mrs Barton purchased it for a down payment of \$12 and 12 monthly payments of \$9.80. By what per cent does the instalment price exceed the cash price? [4]

7 Clark's salary for the year 1945 was \$4350. His estimated taxes were: New York State income tax \$16, property tax of \$2.10 per \$100 on real estate assessed at \$8200, gasoline tax at  $5\frac{1}{2}\phi$  a gallon on 960 gallons, admission and excise taxes \$148, indirect taxes \$88. His employer deducted \$40 a month as Federal withholding tax. What per cent of Clark's salary was his total estimated taxes? [10]

Huntington, New York June 5, 1946

Ninety days after date I promise to pay to the order of William P. Burke.....\$320.00

.....Three hundred-twenty and no/100..... Dollars

Value received with interest at 5%.

[signed] Clyde B. Moran

- 8 *a* When does the above note fall due? [2]  
*b* What amount will Moran have to pay on that date? [2]  
*c* Burke discounted the note on June 23 at 6%. How much did he receive as the proceeds of the note? [6]
- 9 *a* Wall's present wages average \$64 for a 40-hour week, which represents a 28% increase over his prewar wages. What was his average hourly wage before the war? [4]  
*b* On June 30, 1945, Wall deposited \$3600 in a mutual savings bank. The bank pays interest at the rate of  $1\frac{1}{2}\%$  annually, adding the interest to the depositors' accounts on June 30 and December 31. How much will Wall have on deposit on July 1, 1946? [6]
- 10 *a* A sales girl receives a weekly salary of \$35 plus a weekly commission of 5% on all sales in excess of \$500 a week. During two consecutive weeks her total sales were \$475 and \$582 respectively. What was the sales girl's total earnings for the two weeks? [4]  
*b* A poultry farmer sent 25 cases of eggs, 30 dozen to the case, to a commission merchant. The commission merchant sold the eggs at 64¢ a dozen. His charges were: truck expense \$27.50, commission 5%, other expense \$7.80. How much should the commission merchant remit to the poultry farmer? [6]
- 11 Arnell's house valued at \$10,000 was insured for \$7500 at the 3-year rate of 39¢ per \$100. The policy contains the standard 80% coinsurance clause.  
*a* What was the average annual cost of the insurance? [4]  
*b* A fire caused a \$3200 loss to the house. What was the amount Arnell received from the insurance company? [6]
- 12 A merchant purchased 400 dresses at \$9.95 each. During January he sold 60 dresses at \$19.95 each. He reduced the price to \$14.95 and sold 200 dresses during February. He sold the remaining dresses at \$6.95 during March. If expenses were disregarded, what was his average profit per dress on the entire lot? [10]