

The University of the State of New York

283D HIGH SCHOOL EXAMINATION

**BUSINESS ARITHMETIC**

Tuesday, January 20, 1942 — 9.15 a. m. to 12.15 p. m., only

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.

## RAPID CALCULATION TEST

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1-2 a Add: [4]

6258  
 2346  
 829  
 7054  
 5423  
 68  
 8937  
 1784  
 9579  
 2895  
 3656  
 4538  
 6004  
 4370  
 5187  
 7468  
 1246

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b Make the extensions: [5]

62½ lb. @ 88¢ =  
 75 lb. @ \$ 4.40 per cwt =  
 2250 lb. @ \$16.00 per ton =  
 1200 ft @ \$ 6.50 per M =  
 54 bu. @ 83⅓¢ =

c Find the interest on *each* of the following: [5]

\$2700 for 8 days at 6 % =  
 \$ 450 for 36 days at 4 % =  
 \$ 327 for 80 days at 4½% =  
 \$ 200 for 3 months at 5 % =  
 \$ 820 for 4 months at 3 % =

d Complete *each* of the following: [6]

A tax rate of 13.2 mills on \$1 is equivalent to \$. . . . . per \$1000.  
 ⅓% of \$1000 is \$ . . . . .  
 .0025 is equivalent to . . . . . %  
 1.8 divided by 60 equals . . . . .  
 A chair marked at \$6 was sold for \$5; the rate of discount was . . . . . %  
 90 is 66⅔% of . . . . .

# BUSINESS ARITHMETIC

Tuesday, January 20, 1942

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 minimum time requirement is 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 What single discount is equivalent to the series 20%, 25% and 10%?

b An agency sold 1136 trucks in 1940 and 1420 in 1941; find the per cent of increase.

c If a merchant saved \$8.34 by taking a cash discount of 3%, what was the amount of the original invoice?

d A machine costing \$1800 has a trade-in value of \$280 at the end of 5 years. What is the annual depreciation?

e If a workman receives time and a half for overtime, 24 hours of overtime would be the equivalent of how many regular working hours?

4 Mr Moore's bank statement as of October 31, 1941, showed a bank balance of \$1347.50. His checkbook balance was \$1512.95. Checks were outstanding for \$36.30, \$13.40 and \$24.60. A deposit of \$152.25, mailed on October 31, was not recorded on the bank statement, and Mr Moore discovered a check for \$87.50 which had been paid but had not been recorded in the checkbook.

a Reconcile the balances. [8]

b On the statement which you have prepared, indicate the correct checkbook balance. [2]

5 In order to take advantage of the discount on a bill of goods amounting to \$3450, bought December 4, 1941, terms  $\frac{3}{5}$   $\frac{2}{20}$   $\frac{N}{60}$ , Mr Thomas borrowed enough money to pay the bill on December 9, giving his 55-day note at 6%. How much did he save? [10]

6 The manufacturing cost of a certain article is as follows: factory expense \$6.25, materials \$28.50, labor \$16.50. A profit of 20% on the cost is desired. The selling expense amounts to 15% of the selling price. What must be the selling price? [10]

7 In one county the total expense budget for 1940 was \$307,405. Miscellaneous income was \$84,200. The balance was raised by a property tax on a total assessment roll of \$43,680,000.

a Find the tax rate. [Carry the decimal correct to five places.] [6]

b What was Mr Martin's tax if his property was assessed at \$5600? [4]

8 Mr Bernard bought an apartment house for \$10,000, paying \$3500 in cash and giving a 5% mortgage for the remainder. He rented it for \$150 a month. Besides the interest on the mortgage his expenses for the year were as follows: taxes \$300, water \$80, fuel oil \$250, electricity \$60, insurance \$50, miscellaneous \$60, depreciation \$430.

a Find his net profit for the year. [8]

b What rate of income did he receive on his actual investment? [2]

BUSINESS ARITHMETIC — *concluded*

9 A finance company offered to lend Benson \$300, to be repaid at \$50 a month plus interest at 2% a month on the unpaid balance. He decided to borrow the \$300 from a bank where he could repay it in 6 monthly payments of \$51.50 each, including interest.

- a How much interest did he pay the bank? [2]
- b How much interest would he have paid the finance company? [6]
- c How much did he save? [2]

10 Gates and Hart formed a partnership, Gates investing \$11,500 and Hart \$7500. It was agreed that each should receive 5% interest per year on his investment, Hart should receive a salary of \$1200 per year and the remaining net profit should be divided equally. The net profit for the first year was \$4650.

- a How much of this did Gates receive? [5]
- b What was Hart's total income? [5]

11 Mr Carson bought 10 shares of \$100 par, 7% preferred stock, at \$140 per share. He received dividends for one year, then sold the stock at \$142 per share. Brokerage was 26¢ per share on the purchase, 27¢ per share on the sale, and there was a tax of 15¢ per share on the sale.

- a What was his profit on the sale of the stock? [6]
- b How much did he receive in dividends? [2]
- c What was his total gain on the transaction? [2]

12 A vegetable dealer bought 10 crates of lettuce at \$5.20 a crate. He was able to sell 264 heads at 15¢ each. If each crate contained 60 heads, and spoilage averaged 9%, at what price did he have to sell each of the remaining salable heads in order to earn a profit of 25% on the cost of the whole order? [10]