

The University of the State of New York

306TH HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, June 21, 1949 — 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 *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]

$$\begin{array}{r} 1834 \\ 219\frac{1}{4} \\ \hline \end{array}$$

b Make the extensions: [5]

$$\begin{array}{l} 104 \text{ lb. at } \$12\frac{1}{2} \text{ per lb.} = \$ \\ 48 \text{ bu. at } \$1.25 \text{ per bu.} = \$ \\ 16\frac{2}{3} \text{ yd. at } \$4.48 \text{ per yd.} = \$ \\ 4500 \text{ lb. at } \$16 \text{ per ton} = \$ \\ 24 \text{ ft. at } \$4 \text{ per yd.} = \$ \end{array}$$

c Underscore the correct answer for *each* of the following: [4]

1.35 expressed as a per cent is (.135%; 1.35%; 13.5%; 135%).

1.6 multiplied by 10 is (.16; 1.6; 16; 160).

56 increased by 25% of itself is (14; 42; 70; 112).

$\frac{1}{2}\%$ of 86 is (.43; .86; 4.3; 43).

d Compute the interest on *each* of the following: [5]

\$450 for 2 months at 6% = \$

\$840 for 20 days at 3% = \$

\$320 for 90 days at 5% = \$

\$400 for 30 days at $1\frac{1}{2}\%$ = \$

\$ 30 for 112 days at 6% = \$

e Complete the following table of department store sales: [4]

	Cash	Charge	Total
Dept. A	\$862	\$ 294	\$
Dept. B	587	1305	\$
Dept. C	264	973	\$
<i>Totals</i>	\$	\$	\$

BUSINESS ARITHMETIC

Tuesday, June 21, 1949

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 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. [10] [Two credits for each correct answer; no partial credit. Answers only are required in this question.]

- a A chair now sells for \$80 less 10%. What additional per cent of discount must be allowed if the article is to be sold in the future for \$60?
- b Albert's marks on four tests were 80, 90, 80 and 85. What mark must he receive on the next test in order to have an average of 85 on all five tests?
- c What single per cent of discount is equal to a series of discounts of 20% and 15%?
- d An invoice for \$750, terms $\frac{3}{10}, \frac{1}{30}, \frac{2}{60}$, is dated March 14. What amount is needed to pay the invoice on April 11?
- e A vacuum cleaner costing \$84 had a trade-in value of \$36 after being used for four years. What was the average annual depreciation on the cleaner?

4 a Whitaker, a household appliances dealer, plans to make a gross profit of 35% on the selling price of each article sold. At what price must he sell a stove costing \$130 in order to make the desired gross profit? [4]*

b Malone engaged a commission merchant to buy potatoes for him. The commission merchant bought 300 bushels at \$1.65 per bushel, 280 bushels at \$1.50 per bushel, and 200 bushels at \$1.48 per bushel. He charged Malone 5% commission on the purchase price. Freight and other charges amounted to \$16.85. What was the total price Malone paid for the potatoes? [6]*

5 a A share of stock with a par value of \$100 pays a quarterly dividend of \$1.40. If Stokes buys a share for a total cost of \$80, including brokerage and other expenses, what actual per cent of dividend does he receive on his investment? [4]*

b Penn is employed on a 40-hour-per-week basis at \$1.30 per hour, with time-and-a-half for overtime. Last week he worked 48 hours. One per cent of his total pay was deducted for Federal old-age benefits, \$8.50 for Federal income tax, \$5.00 for his savings account, and \$.75 for insurance and hospitalization. What amount of money did Penn receive after all deductions had been made? [6]*

6 a Hoag and Woolsey are partners in a firm, with investments of \$25,000 and \$15,000 respectively. Profits are to be shared in proportion to the partners' investments. If the firm made a net profit of \$9600 during 1948, what amount did Hoag receive as his share? [4]*

b Landon's bank statement showed a balance of \$312.84. His checkbook balance was \$103.72. Checks for \$86.12, \$119.21, and \$5.29 were outstanding, and the bank had deducted a service charge of \$1.50. Prepare a reconciliation statement and indicate the correct available checkbook balance. [6]*

7 On May 13, 1949, Alvin Baxter discounted at his bank a customer's 60-day note dated April 25, bearing interest at the rate of 4%. The face of the note was \$1500. The bank discount rate was 6%. How much did he receive as net proceeds from the note? [10]*

BUSINESS ARITHMETIC — *concluded*

- 8 *a* In a community with a total assessed valuation of \$1,250,000 a real estate tax of \$39,375 is to be raised. What tax rate per \$1000 will be necessary to collect this amount of money? [4]*
- b* Ackert, a luggage dealer, buys suitcases for \$40, and marks them up 25% of the cost. Added to the marked price is a 20% Federal tax, and a 2% local retail sales tax, each calculated on the marked price. What is the total cost of one of these suitcases to a customer? [6]*
- 9 *a* Ross insured his house, valued at \$21,000, for \$14,000 under a policy containing an 80% co-insurance clause. If a fire loss of \$9600 occurred, how much would Ross collect from the insurance company? [6]*
- b* Butler insured his house for \$10,000 with the Superior Insurance Company, and for \$4000 with the Peerless Insurance Company. If a fire loss of \$3500 occurred, what amount of money would Butler receive from the Superior Company? [4]*
- 10 Vollmer purchased a house for \$9600 in cash, and immediately rented it to a tenant for \$70 a month. At the end of two years, Vollmer sold it for \$11,900. Taxes, repairs, insurance, interest lost on investment and other expenses during the two years cost him \$1580.
- a* What was his net gain from renting the house? [4]*
- b* What per cent of his original investment was the total gain from renting and selling? [6]*
- 11 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. Reduce each answer to simplest form.] [10]
- a* Add 871.4; 92.8; 12.36; .07
- b* Subtract 19.4 from 37.12
- c* Divide 78.12 by 4.2
- d* Add $1\frac{3}{4}$; $5\frac{1}{2}$; $2\frac{2}{3}$
- e* Using the four-step process, multiply $36\frac{1}{3}$ by $9\frac{1}{2}$
- f* Divide $3\frac{1}{5}$ by $\frac{4}{5}$
- g* Change 3 gallons 2 quarts 1 pint to pints
- h* Multiply 12.4 by 3.06
- i* Subtract $5\frac{1}{3}$ from $8\frac{2}{3}$
- j* Express $\frac{3}{7}$ as a decimal correct to the *nearest thousandth*.
- 12 Walters, a radio dealer, buys 48 sets at \$45 each. He sells 25 of them at \$70 each, 20 at \$60 each, and the remainder at \$40 each. What is the average profit per set which Walters makes on the entire transaction, to the *nearest tenth* of a cent? [10]*

* *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.]