

The University of the State of New York

303D HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Tuesday, June 22, 1948—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]

$$\begin{array}{r} \$29.00 \\ 3.54 \\ \hline \$ \end{array}$$

b Make the extensions: [5]

$$\begin{array}{l} 57 \text{ lb. at } 16\frac{2}{3}\phi \text{ per lb.} = \$ \\ 12\frac{1}{2} \text{ bu. at } 64\phi \text{ per bu.} = \$ \\ 250 \text{ lb. at } \$4 \text{ per cwt} = \$ \\ 27 \text{ ft at } \$2 \text{ per yd} = \$ \\ 400 \text{ lb. at } \$30 \text{ per ton} = \$ \end{array}$$

c Complete *each* of the following statements: [4]

.067 expressed as a per cent is _____%.

$\frac{1}{4}\%$ of \$360 is \$ _____.

At 25 ϕ each, we can buy _____ articles for \$4.50.

72 decreased by $\frac{1}{3}$ of itself is _____.

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

\$900 for 3 months at 6% = \$

\$540 for 20 days at 2% = \$

\$ 80 for 30 days at $1\frac{1}{2}\%$ = \$

\$240 for 60 days at 7% = \$

\$ 60 for 94 days at 6% = \$

e Complete the following table of salesmen's earnings: [4]

	<i>April</i>	<i>May</i>	<i>Total Earned</i>
Havill	\$212	\$235	\$
Prentice	391	361	\$
Green	279	284	\$
Totals	\$	\$	\$

BUSINESS ARITHMETIC

Tuesday, June 22, 1948

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 Smith purchased goods, the invoice being dated March 16, terms 2/30 n/60. What is the latest date on which he can pay the bill and still take advantage of the cash discount offer?
 - b What single rate of discount is equivalent to a discount series of 25% and 10%?
 - c Hall Brothers sell radios at \$240, less 33 $\frac{1}{3}$ %. What additional per cent of discount did they give on a sale where these radios were marked down and sold for \$140?
 - d Candy bars purchased at 42¢ per dozen bars were sold for 6¢ each. How much was gained in selling 5 dozen of these bars?
 - e Richman, a real estate broker, sold a house for a client for \$12,500. If 5% commission was charged on the transaction, what amount of money did the client receive as net proceeds of the sale?
- 4 a Miss Wilson is a saleslady in a department store and is paid a weekly salary of \$35, with a commission of 5 $\frac{1}{2}$ ¢ per pair on all hosiery sales in excess of 70 pairs per week. During the first week in June she sold 98 pairs, and during the second week 64 pairs. What were her total earnings for the two weeks? [6]*
- b A merchant buys rugs for \$110, less 10%. Freight charges are \$6. At what price must he sell these rugs in order to make a gross profit of 33 $\frac{1}{3}$ % of their total cost? [4]*
- 5 a The Oliver Company purchased a delivery truck for \$2600. At the end of one year, they sold it for \$2300. In addition to the depreciation, the expenses for operating the truck were: repairs and servicing \$40, gas and oil \$622, licensing and insurance \$198. The truck was driven 12,673 miles. What was the average cost per mile of operating it, to the nearest tenth of a cent? [6]*
- b Mrs Carter can purchase an electric refrigerator for \$240 cash, or on the deferred payment plan, paying \$70 down and 7 monthly instalments of \$30 each. The instalment price is what per cent greater than the cash price? [4]*
- 6 a Albee and Johnston are partners in a firm. Albee's investment is \$7500 and Johnston's is \$4500. How much did Albee receive as his share of the 1946 net profit of \$5600 if it was divided in proportion to the partners' investments? [4]*
- b In 1947, with the same investments as in 1946, the partners decided to allow a 5% return on their investments and to divide the remaining net profit equally. How much did Albee receive if the firm made a net profit of \$3750 that year? [6]*

* 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.]

BUSINESS ARITHMETIC — *concluded*

- 7 *a* Edmonds owns a house and lot assessed at \$6400 and two additional lots, each of which is assessed for \$850. The 1947 tax rate in his community was \$27.80 per \$1000. What tax did he pay on the property in 1947? [4]*
- b* When Edmonds prepared his New York State income tax return for 1947, he figured that the amount of his net taxable income, after all deductions had been made, was \$4942 for that year. This amount was subject to a tax of 2% on the first \$1000, 3% on the next \$2000, and 4% on the next \$2000 or any part thereof. What was the total of his New York State income tax? [6]*

- 8 *a* Bailey bought hospitalization, medical and surgical insurance by paying a quarterly premium of \$6.25. After he had paid premiums for 8 years, he entered a hospital for an operation, which cost as follows:

Hospital room and board, 10 days @ \$10.50 per day.....	\$
Surgery fee	\$200
Bandages and medicine.....	15
Operating room and anesthetic fee	20

The entire cost of this illness was paid by the insurance company. How much did Bailey save by having this insurance protection? [6]*

- b* Barker insured his office building valued at \$15,000 for 80% of value, paying 54¢ per \$100 for a 3-year policy. What was the average yearly cost of the insurance? [4]*

- 9 Billings had a balance of \$583 in the bank. To obtain funds to pay for an invoice amounting to \$852.50, terms 2/10 n/30, and to take advantage of the cash discount, he discounted at the bank, at 6%, his own 90-day, non-interest-bearing note for \$300 and received credit for the proceeds. What was Billings' bank balance after he had discounted the note and paid the invoice, less the cash discount? [10]

- 10 *a* Morton's business failed and he went into bankruptcy, owing debts of \$11,480. The net cash to be distributed to his creditors was \$8150.80. How much was paid to a creditor with a claim of \$2200? [4]*

- b* Simmons works in a factory and is paid \$1.10 per hour regular time for a 40-hour week, with time and a half for overtime. During a certain week, he worked 44 hours. One per cent of his total pay was deducted for federal old-age benefits, \$7.20 for federal income tax, \$.25 for Community Chest donation, and \$.60 for group insurance and hospitalization. What was the amount of money Simmons received after all deductions had been made? [6]*

- 11 Answer all parts of this question. [Reduce each answer to its simplest form.] [One credit for each correct answer; no partial credit; no credit allowed unless work is shown] [10]

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| <i>a</i> Using the four-step process, multiply $36\frac{1}{4}$ by $8\frac{1}{3}$ | <i>f</i> Subtract 116.405 from 487.2 |
| <i>b</i> Subtract $3\frac{3}{8}$ from $21\frac{1}{3}$ | <i>g</i> Divide $1\frac{2}{3}$ by $1\frac{1}{3}$ |
| <i>c</i> Divide 47.432 by 15.4 | <i>h</i> Add: 873.1; 11.962; 429.53; 1587.41 |
| <i>d</i> Add $7\frac{1}{3}$; $5\frac{2}{5}$; $3\frac{1}{2}$ | <i>i</i> Express \$19.867 to the nearest whole cent. |
| <i>e</i> Multiply 37.6 by .008 | <i>j</i> Express 3 ft 7 in. as inches. |

- 12 Including the following heading, make a bar graph to show the comparisons below: [10]
ESTIMATED RESERVES OF OIL IN 1946 (in billions of barrels)

United States	21
Russia	8
Iran	7
Venezuela	7
Iraq	5