

The University of the State of New York  
REGENTS HIGH SCHOOL EXAMINATION

**BUSINESS ARITHMETIC**

Monday, June 17, 1968 — 1:15 to 4:15 p.m., only

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Instructions for Part I — Mental Calculation Test

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

All questions on Part I are to be worked mentally and the *answers only* placed on the answer sheet on page 3. At the end of 15 minutes, work must stop and the answer sheet used for this part of the examination must then be immediately handed to the examiner.

The answer sheet for this part of the test is page 3, which is perforated. When the signal is given, fold page 3 along the perforation and then, slowly and carefully, tear it off. Then complete the rest of the heading of your answer sheet.

Do not begin work on the test until your teacher tells you to do so.

All answers must be written with pen and ink.

## Part I

## MENTAL CALCULATION TEST

*Directions* (1-20): Write the correct answer to *each* of the following in the space provided on the separate answer sheet (page 3): [20]

1 Add: 
$$\begin{array}{r} 8941 \\ 375 \\ 1097 \\ \underline{682} \end{array}$$

2 Subtract: 
$$\begin{array}{r} 63 \\ \underline{28\frac{2}{3}} \end{array}$$

- 3 Express the property tax rate of \$62.20 per \$1,000 as an equal rate per \$1.
- 4 What number is 25% greater than 64?
- 5 Multiply 76.042 by 100.
- 6 If a line on a graph a quarter of an inch long represents \$500, how many inches would represent \$3,500?
- 7 What is the cost of 240 items at  $\$.37\frac{1}{2}$  each?
- 8 Write  $1\frac{1}{2}\%$  as a decimal.
- 9 How much is a 2% sales tax on an article selling for \$87?
- 10 What is the cost of 450 boxes at \$8 per C?
- 11 The latest date on which an invoice dated April 10 with terms 2/10 n/30 can be paid in order to receive a cash discount is (April 12; April 20; May 9; May 10)
- 12  $\frac{3}{4}$  of 2,592 is approximately (195; 650; 1,650; 1,950)
- 13 56% expressed as a fraction in its *lowest* terms is  $\left(\frac{56}{100}; \frac{28}{100}; \frac{14}{25}; \frac{7}{25}\right)$
- 14 The decimal .085 has the same value as (850%; 85%; 8.5%; .85%)
- 15 Which is the largest? ( $1\frac{1}{2}\%$ ; .15; .115;  $\frac{1}{2}$ )

*Directions* (16-20): What is the interest on *each* of the following?

- 16 \$500 for 15 days at 6%
- 17 \$280 for 30 days at 6%
- 18 \$230 for 60 days at 3%
- 19 \$3,000 for 4 months at 6%
- 20 \$600 for 19 days at 6%

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The answers to the questions on the following parts of this examination are to be written in the separate answer booklet. Now complete the heading of your answer booklet. When you have finished the heading, you may begin the examination immediately.

Part II

Answer all questions in this part. Write only your answers in the separate answer booklet. [40]

- 1 Mrs. Parker deposited checks for the following amounts: \$49.38; \$81.47; \$10.13; \$.94; \$63.44; \$37.63. What was the total amount of this deposit?
- 2 A salesman earned \$82, \$96, \$78, and \$92 each week for four weeks. What amount will he need to earn the fifth week in order to have a final average salary for five weeks of \$85?
- 3 The Foley Contracting Company purchased the following carloads of sand this week:  
Monday,  $4\frac{1}{4}$   
Tuesday,  $7\frac{3}{8}$   
Wednesday,  $12\frac{1}{2}$   
Thursday,  $11\frac{2}{3}$   
Friday,  $8\frac{5}{8}$   
What was the total number of carloads of sand purchased by the Foley Contracting Company this week? [Express answer in simplest form.]
- 4 In 1966, the State Realty Company received \$12,450 in rent income. In 1967, the firm received \$10,209 in rent income. What was the percent of decrease in rent income?
- 5 Southwestern High School students consume 1,164 quarts of ice cream per week in the student cafeteria. The school pays \$.95 a gallon for this ice cream. What is the total weekly cost of ice cream at Southwestern High?
- 6 The Thruway Authority sold \$8,000,000 worth of bonds to raise funds for road construction. The bonds paid interest at the rate of  $3\frac{3}{4}\%$  per year. What is the total cost of interest per year on these bonds?
- 7 The school bookstore sells business arithmetic textbooks for \$4.50 each. If these books originally cost the bookstore \$4.00, what is the percent of gross profit based on the cost?
- 8 What amount of money will be needed to pay an invoice for \$420 less a cash discount of 2%?
- 9 Peterson was paid a 4% commission on his first \$500 of sales, 6% on his next \$500 of sales, and 8% on all sales over \$1,000. Last week his sales were \$1,049. What total amount of money did he earn as commission?
- 10 Hall was paid a straight commission of 8% on all sales. How much were his sales last month if his commissions amounted to \$728?
- 11 What is the bank discount on a \$720, noninterest-bearing promissory note that is discounted at 4% 30 days before it is due?
- 12 Oldham paid an annual premium of \$72 for fire insurance on his property. At the end of three months Oldham canceled the policy and was refunded \$46.80. What percent of the annual premium was refunded?
- 13 A machine costing \$1,800 was estimated to depreciate in value at the annual rate of 7% of the original cost. What was the amount of the average monthly depreciation on this machine?
- 14 A partner who had invested \$20,000 in a business was to receive 5% on his original investment, plus a salary of \$100 per week, and was to share equally in any remaining net profit. His share of the remaining net profit last year was \$3,300. What were his total earnings for the year?
- 15 Robbins, Walsh, and Eaton invested \$25,000, \$10,000, and \$5,000, respectively, in a partnership under an agreement that the net profits would be shared in proportion to the partners' individual investments. What percent of the net profits should Robbins receive?

- 16 Last month Mr. Watson's water bill was \$5.40. The water company charges \$3.00 for the first 6,000 gallons of water and \$.40 for each additional thousand gallons thereafter. How many gallons of water did Mr. Watson use last month?
- 17 For February and March, Mr. Hotine used 845 kilowatt-hours of electricity. At a cost of 2.8 cents per kilowatt-hour, what was Mr. Hotine's *average* monthly electricity bill during this 2-month period?
- 18 [Write only the *number* preceding the correct answer.] Fisher and Sons bought a table at a cost of \$20. It was sold at a gross profit of  $33\frac{1}{3}\%$  of the selling price. To determine the selling price,
- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| 1 multiply $.66\frac{2}{3}$ by \$20 | 3 divide \$20 by $.33\frac{1}{3}$ |
| 2 multiply $.33\frac{1}{3}$ by \$20 | 4 divide \$20 by $.66\frac{2}{3}$ |

- 19 Johnson invested \$600 in North Pacific stock, which sold at \$39 a share. If the total cost of brokerage and other expenses was \$15.00, how many shares did Johnson buy?
- 20 Roberts has saved \$2,800 toward the price of a house that sells for \$16,000. If a bank will lend him 75% of the selling price on a mortgage, what additional amount of money must he save?

### Part III

This part consists of five groups of questions. Choose four of these five groups. Be sure to answer all questions in each group chosen. Write only your answers on the separate answer sheet. [16]

#### Group 1

*Directions* (21-22) : Base your answers to questions 21 and 22 on the information below :

Helman received an invoice dated April 2 for \$680 less a trade discount of 25% and subject to terms of 5/20, 2/45, n/90.

- 21 What is the amount of the check written on May 1 to pay the invoice? [2]
- 22 What is the latest date on which Helman's invoice is due for payment? [2]

#### Group 2

*Directions* (23-24) : Base your answers to questions 23 and 24 on the information below :

On June 9, Mr. Casey discounted at the bank a customer's 3-month, \$5,000 promissory note bearing interest at 6%, dated April 30.

- 23 What is the maturity value of the note? [2]
- 24 For how many days did the bank charge discount? [2]

#### Group 3

*Directions* (25-26) : Base your answers to questions 25 and 26 on the information below :

Seven years ago, New Forest High School purchased 12 calculators for \$178 each. This year, the school purchased 12 new calculators with a list price of \$235 each and received a trade-in allowance of \$45 on each of the older machines.

- 25 What was the amount of average annual depreciation on each of the old calculators? [2]
- 26 What net amount of money did the school have to pay for the new calculators? [2]

#### Group 4

*Directions* (27-28) : Base your answers to questions 27 and 28 on the information below :

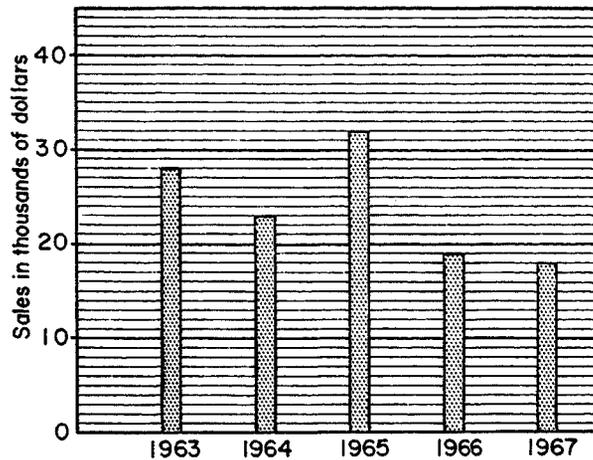
A store uses the code phrase BEAUTY SHOP with an X for repeating numbers in pricing its merchandise.

- 27 Write the code marking for a shirt that sells for \$3.35. [2]
- 28 What is the price of an article which bears the code ESOH? [2]

Group 5

Directions (29-32): Base your answers to questions 29 through 32 on the graph below.

PERMASET PLASTICS COMPANY  
ANNUAL SALES FOR THE YEARS 1963-1967



- 29 What was the amount of the sales during the year with the lowest annual sales? [1]
- 30 If the company's salesmen are to increase sales in 1968 by 20% over the 1967 sales, what will be the amount of expected sales in 1968? [1]
- 31 What was the amount of the total sales for 1963 through 1965? [1]
- 32 What was the amount of the average yearly sales for the period shown? [1]

Part IV

Answer any four of the five questions in this part. All work must be shown. [24]

- 33 Frazier's checkbook had a balance of \$151.37 at the end of last month. His bank statement balance on the same date was \$307.98. A service charge of \$1.32 had been made. A comparison of canceled checks with check stubs showed that the following checks were outstanding: \$28.54; \$19.29; and \$101.10. One of the canceled checks written for \$45 had been mistakenly entered on the checkbook stub as \$54. Prepare Frazier's bank reconciliation statement and indicate the correct available checkbook and bank balances.
- 34 Post is employed on the basis of 8 hours a day with time and one-half for all overtime hours worked beyond 8 hours. His regular hourly pay rate is \$2.30. Last week he worked the following hours:
- Monday, 8 hours
  - Tuesday, 9 hours
  - Wednesday, 8 hours
  - Thursday, 6 hours
  - Friday, 10 hours
- From Post's total earnings, 4.4% was deducted for FICA taxes. In addition, \$9.80 was deducted for federal withholding tax, \$1.30 for state withholding tax, and \$.30 for disability benefits. What net amount of money did Post receive as take-home pay for the week?
- 35 Watson insured his house for \$13,500 at an annual rate of \$.35 per \$100, and the contents of his home for \$6,500 at an annual rate of \$.42 per \$100. What is Watson's total annual cost for insurance?
- 36 Deere can buy an air conditioner for \$269 cash, or on the installment plan by paying \$55.00 down and making 12 equal monthly payments of \$19.50 each. Deere has \$55.00 in cash. He borrows the balance of the cash price from the bank for one year at 6% interest. What amount of money does Deere save by borrowing from the bank and paying cash instead of paying on the installment plan?
- 37 Nolan owns a house and lot valued at \$19,500, in a community where property is assessed at 50% of its true value. The rate of taxation in the current year is \$32.40 per \$1,000 of assessed value. What will Nolan's property tax bill be this year?

# FOR TEACHERS ONLY

# BA

## SCORING KEY BUSINESS ARITHMETIC

Monday, June 17, 1968 — 1:15 to 4:15 p.m., only

Use only *red* ink or pencil in rating Regents papers. Do not attempt to *correct* the pupil's work by making insertions or changes of any kind. Use checkmarks to indicate pupil errors.

Scores should be cumulated within parts of the examination and transferred to the cover of the answer booklet.

### Examination Committee Members

Donald F. Burns — Kenmore West High School  
Regis Hammond — Downsville Central School  
Antoinette Lewis — Troy High School  
William Mammosser — Irondequoit High School, Rochester  
Arthur Sacks — Sachem High School, Lake Ronkonkoma  
Elton T. Murphy — State Education Department, *Acting Chairman*

### Part I — Mental Calculation Test

Allow a total of 20 credits, one credit for each of the following. [Allow no partial credit.]

- |                                    |                               |
|------------------------------------|-------------------------------|
| (1) 11,095                         | (12) 1,950                    |
| (2) $34\frac{1}{2}$                | (13) $\frac{14}{25}$          |
| (3) \$.0622 or 6.22¢ or 62.2 mills | (14) 8.5% or $8\frac{1}{2}\%$ |
| (4) 80                             | (15) $\frac{3}{2}$            |
| (5) 7604.2                         | (16) \$1.25                   |
| (6) $1\frac{3}{4}$                 | (17) \$1.40                   |
| (7) \$90                           | (18) \$1.15                   |
| (8) .015 or $01\frac{1}{2}$        | (19) \$60                     |
| (9) \$1.74                         | (20) \$1.90                   |
| (10) \$36                          |                               |
| (11) April 20                      |                               |

### Part II

Allow a total of 40 credits, two credits for each correct answer. [Allow no partial credit.]

- |                                |                                 |
|--------------------------------|---------------------------------|
| (1) \$242.99                   | (11) \$2.40                     |
| (2) \$77                       | (12) 65%                        |
| (3) $44\frac{5}{8}$            | (13) \$10.50                    |
| (4) 18%                        | (14) \$9,500                    |
| (5) \$276.45                   | (15) $62\frac{1}{2}\%$ or 62.5% |
| (6) \$300,000                  | (16) 12,000                     |
| (7) $12\frac{1}{2}\%$ or 12.5% | (17) \$11.83                    |
| (8) \$411.60                   | (18) 4                          |
| (9) \$53.92                    | (19) 15                         |
| (10) \$9,100                   | (20) \$1,200                    |

[OVER]

BUSINESS ARITHMETIC — *concluded*

**Part III**

Allow a total of 16 credits, 4 credits for each of four groups. [Allow no partial credit for any one question.]

Group 1		Group 3		Group 5	
(21)	\$499.80 [2]	(25)	\$19 [2]	(29)	\$18,000 [1]
(22)	July 1 [2]	(26)	\$2,280 [2]	(30)	\$21,600 [1]
				(31)	\$83,000 [1]
				(32)	\$24,000 [1]
Group 2		Group 4			
(23)	\$5,075 [2]	(27)	AXT [2]		
(24)	51 days [2]	(28)	\$27.98 [2]		

**Part IV**

Allow a total of 24 credits, 6 credits for each of four questions. [Allow partial credit as indicated in the pamphlet entitled *Suggestions for the Rating of Regents Examination Papers in Business Subjects.*]

(33)	\$159.05 [6]	(36)	\$7.16 [6]
(34)	\$82.05 [6]	(37)	\$315.90 [6]
(35)	\$74.55 [6]		