

The University of the State of New York  
REGENTS HIGH SCHOOL EXAMINATION  
**BUSINESS ARITHMETIC**

Friday, June 17, 1966 — 1:15 to 4:15 p.m., only

Fill in the following lines:

Name of pupil..... Name of teacher.....

Name of school.....

**Instructions for Part I — Mental Calculation Test**

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

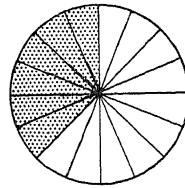
All questions on Part I are to be worked mentally and the *answers only* placed on the question paper. At the end of 15 minutes, work must stop and the sheet used for this part of the examination must then be detached from the rest of the question paper and immediately handed to the examiner.

All answers must be written with pen and ink.

## MENTAL CALCULATION TEST

*Directions (1-17): Write the correct answer to each of the following on the line at the right. [17]*

- 1 Write 21.76% as a decimal. 1.....
- 2 What number is 40% of 700? 2.....
- 3 16 is what percent of 64? 3.....%  
.....%
- 4 What would be the amount of a 2% sales tax on a purchase of \$4,000? 4 \$.....
- 5 Multiply: 6 hours 30 minutes by  $1\frac{1}{2}$  5.....
- 6 What would be the cost of 360 gallons at  $8\frac{1}{3}$  cents per gallon? 6 \$.....
- 7 75% of 1190 is approximately  
(90; 300; 750; 900) 7.....
- 8 Which is the highest rate for property taxes?  
(\$.0525 per \$1.00; 23 mills per \$1.00; \$3.85 per \$100; \$47.50 per \$1,000) 8 \$.....
- 9 Multiply: 25 by .24 9.....
- 10 At \$.25 per dozen, how many dozen can be purchased for \$25?  
( $6\frac{1}{4}$ ; 10; 100; 150) 10 .....



- 11 What percent of the circle is shaded?  
(20%; 25%; 37½%; 50%)

11 .....%  
.....%

- 12 What percent has the same value as .034?  
(.34%; 3½%; 34%; 340%)

12 .....%  
.....%

*Directions (13-17): What is the interest on each of the following?*

- 13 \$1,200 for 15 days at 6% 13 \$.....
- 14 \$280 for 60 days at 3% 14 \$.....
- 15 \$5,000 for 120 days at 6% 15 \$.....
- 16 \$600 for 60 days at 2% 16 \$.....
- 17 \$300 for 58 days at 6% 17 \$.....

- 18 What is the total of the following section of a sales slip? [No partial credit.] [3]

Quantity	Description	Unit Price	Amount
5	Desk sets — pen and pencil	\$ 4.40	\$.....
600	File folders	1.50 per C	.....
6 doz.	Ballpoint pens	28.80 per gross	.....
		TOTAL	\$.....

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Friday, June 17, 1966 — 1:15 to 4:15 p.m., only

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 Jackson deposited checks for the following amounts in his checking account: \$12.75; \$8.83; \$17.46; \$1.93; \$20.72; \$2.05. What was the total amount of this deposit?

- 2 What is the total of the following change memorandum?

Change Memorandum		
Denomination	Number	Amount
\$20.00	6	— —
10.00	4	— —
5.00	7	— —
1.00	11	— —
.50	3	— —
.25	2	— —
.10	6	— —
.05	3	— —
.01	24	— —

- 3 If an office worker earns \$63.75 a week by working  $37\frac{1}{2}$  hours, what is his hourly rate of pay?

- 4 In 1964, the enrollment at City Central High School was 675 students. In 1965, the enrollment at the same school was 837 students. What was the percent of increase in the student population from 1964 to 1965?

- 5 On September 30, Carron's checkbook balance was \$668.83. Upon comparing the statement with his checkbook, Carron found that a canceled check for \$31 had been omitted from his checkbook stub. What was his correct checkbook balance on that date?

- 6 Bardin's monthly bank statement showed a balance of \$3,162.18. There were no service charges. Outstanding checks amounted to: \$200.03; \$103.40; \$72.29; \$21.01. What was Bardin's correct available bank balance?

- 7 An invoice for \$725, dated April 28, has terms of  $\frac{2}{10}$ ,  $\frac{1}{30}$ ,  $\frac{N}{60}$ . In order to secure the largest possible cash discount, on or before what date would the person paying this invoice need to make payment?

- 8 An invoice of goods dated November 23 amounts to \$585 with terms of  $\frac{3}{10}$ ,  $\frac{N}{30}$ . What amount of money is needed to pay this invoice on December 3?

- 9 A store selling bicycles places code letters under the selling price to mark the cost of its merchandise. The code words MELODY HITS are used as the key for numbers 1 through 0. What is the amount of the gross profit on a bicycle marked  $\frac{\$42.95}{LEDS}$ ?

- 10 A merchant discounted at his bank, at 6%, his own 90-day promissory note for \$800. What sum of money did he receive as net proceeds from discounting this note?

- 11 Mr. Brown earns \$125 a week as a bookkeeper. At the current rate of 4.2%, what amount should be deducted from Mr. Brown's weekly pay for FICA taxes?

- 12 At the Kelsey Foundry, employees work on a 40-hour-per-week basis with time and one-half for all overtime. Last week, one employee whose regular hourly pay rate was \$1.80 worked 45 hours. What total amount of money did he earn?

- 13 The Gibson Co. pays its employees on an 8-hour-per-day basis with time and one-half for overtime. The time card for Mr. Jordan, for Monday, is shown below:

Pay Period Ending 4/30/65							
No. 652-05-2641							
NAME <u>Jordan, Albert</u>							
DAY	IN	OUT	IN	OUT	IN	OUT	TOTAL
Mon.	8:00 a.m.	12:00 noon	12:30 p.m.	4:30 p.m.	5:00 p.m.	7:00 p.m.	

If Mr. Jordan is paid at the rate of \$2 per hour, what amount of money did he earn on Monday?

BUSINESS ARITHMETIC — *continued*

- 14 A machine depreciates at the rate of \$280 a year, which is equal to 8% of the cost of the machine. What was the original cost of the machine?
- 15 A 17-year-old machine was sold for scrap for \$80. The machine had cost \$3,531 when it was originally purchased. What was the amount of the average annual depreciation on this machine?
- 16 The cash price of an electric heater is \$40. The heater can be purchased on the installment plan by paying \$17 down with monthly payments of \$3.10 each for ten months. By what percent is the installment price greater than the cash price?
- 17 Mr. Adams obtained a \$5,000 mortgage loan on his new home and agreed to repay the principal and interest in payments of \$40 per month over a period of 15 years. What amount of money will he have paid in interest during the life of this mortgage?
- 18 A builder of houses had the following expenses to consider in the cost of constructing a certain house:
- |                                         |         |
|-----------------------------------------|---------|
| Lot .....                               | \$1,908 |
| Building materials .....                | 5,400   |
| Plumbing, heating and electrical work.. | 1,515   |
| Landscaping .....                       | 297     |
| Labor and other expenses.....           | 5,280   |
- At what price must the builder sell this house in order to make a profit of 15% based on the cost of construction?
- 19 In a certain school district, the tax rate is \$60.25 per \$1,000 of assessed valuation. What is the amount of tax that will be paid on property that is assessed for \$2,600?
- 20 The amount of money to be raised from property taxes in the village of Sundbury is \$579,204. The assessed valuation of property in the village totals \$12,456,000. What will be the tax rate per \$1,000 of assessed valuation for the village?
-

## 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 in the separate answer booklet.

## Group 1

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

On May 19, Mr. Dolan borrowed \$900 for 80 days at 6% interest. He repaid the loan when it was due.

- 21 What was the total amount of money that Mr. Dolan repaid? [2]

- 22 On what date did Mr. Dolan repay the loan? [2]
- 

## Group 2

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

A salesman is paid a salary of \$60 a week, plus a commission of 10% on that part of his sales in excess of \$500 per week. Last week his total sales amounted to \$950.

- 23 What amount of money did he earn last week? [2]

- 24 If he wishes to earn \$120 next week, what must his total sales be next week? [2]
- 

## Group 3

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

Mr. Cahill drove his automobile 8,864 miles in 1965. During that year his expenses in connection with the car were as follows:

554 gallons of gasoline at 30¢ per gallon	\$166.20
Garage rent, 12 months at \$10 per month	120.00
Oil and lubrication.....	37.50
Insurance .....	165.00
Estimated depreciation .....	600.00
Repairs .....	90.00
License plates .....	18.00
Miscellaneous .....	44.26

- 25 What was the average number of miles per gallon of gasoline that Mr. Cahill obtained that year? [2]

- 26 What was the average cost per mile of operating the car that year? [2]
- 

## Group 4

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

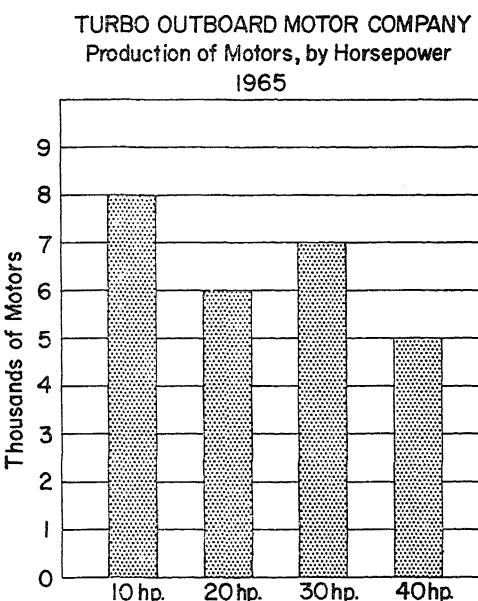
Samuels insured his store for \$8,000 with the National Insurance Company and for \$7,000 with the American Insurance Company. A fire loss of \$3,000 occurred.

- 27 What amount of money should Samuels receive from the National Insurance Company? [2]

- 28 What is the cost of a one-year policy from the American Insurance Company if the premium rate is 53 cents per \$100 of insurance? [2]
- 

## Group 5

*Directions (29–32):* Base your answers to questions 29 through 32 on the following graph:



- 29 What was the total number of motors produced in 1965 by the Turbo Outboard Motor Company? [1]

- 30 By what percent did the production of 30-horsepower motors exceed the production of 40-horsepower motors? [1]

- 31 If the selling price of 10-horsepower motors is \$115 each, what was the total amount of sales for 10-horsepower motors in 1965? [1]

- 32 It is estimated that 40-horsepower motors will show a 20% increase in sales in 1970 compared to 1965. How many 40-horsepower motors should be planned for production in 1970? [1]
-

BUSINESS ARITHMETIC — *concluded*

Part IV

Answer any four of the five questions in this part. All work must be shown in the separate answer booklet.

- 33 The Johnson Appliance Company is able to buy refrigerators from the Mount Distributing Company for \$420 each, less a trade discount of 35%. They are also able to buy identical refrigerators from the Westover Distributing Company for \$380 each, less trade discounts of 20% and 15%; but freight charges of \$11 for each refrigerator must be paid to the Westover Distributing Company. How much will be saved on each refrigerator by taking advantage of the better offer? [6]

- 34 Howarth and Smythe are partners in a supermarket, with investments of \$14,000 and \$8,000, respectively. Profits and losses are shared in proportion to each partner's investment. In a recent year, the firm had sales of \$87,460 and costs and expenses of doing business of \$66,340. What amount of money did Smythe receive as his share of the net profit? [6]

- 35 Harold Church owned a swimming pool which held 12,000 gallons of water. He filled the pool 8 different times last summer. If his water bill for the summer was based on the following rates, how much did the water for the swimming pool cost last summer? [6]

*Cost per thou-  
sand gallons*

First 15,000 gallons.....	27¢
Next 60,000 gallons.....	15¢
Next 150,000 gallons.....	10¢
Above 225,000 gallons.....	8¢

- 36 George Clancy purchased 20 shares of common stock at a total cost of \$1,722.50, including brokerage charges. He kept the stock 3 years and received regular quarterly dividends of \$2 per share. He then sold this stock and received \$1,912 as net proceeds from the sale. What was the amount of Clancy's total gain from owning and selling this stock? [6]

- 37 A ticket seller at a school track meet was given 300 75-cent tickets for adults, 400 50-cent tickets for students and \$15 in cash for change. After the meet, he turned back to the office 28 adult tickets, 22 student tickets and \$409 in cash. By what amount of money was his actual cash short or over at the end of this track meet? [Indicate whether the amount is short or over.] [6]

# FOR TEACHERS ONLY

## BA

### SCORING KEY BUSINESS ARITHMETIC

Friday, June 17, 1966 — 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

John Favreau — Schalmont Central School, Schenectady

William Mammoser — Irondequoit High School, Rochester

Douglas T. Adamson — State Education Department, *Acting Chairman*

#### Part I — Mental Calculation Test

Allow a total of 20 credits, one credit for each of 1-17; three credits for 18. [Allow no partial credit.]

- |                   |                   |                        |              |
|-------------------|-------------------|------------------------|--------------|
| (1) .2176         | (6) \$30          | (11) $37\frac{1}{2}\%$ | (16) \$2     |
| (2) 280           | (7) 900           | (12) $3\frac{3}{4}\%$  | (17) \$2.90  |
| (3) 25%           | (8) .0525 per \$1 | (13) \$3               | (18) \$45.40 |
| (4) \$80          | (9) 6             | (14) \$1.40            |              |
| (5) 9 hr. 45 min. | (10) 100          | (15) \$100             |              |

#### Part II

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

- |              |                |              |               |
|--------------|----------------|--------------|---------------|
| (1) \$63.74  | (6) \$2,765.45 | (11) \$5.25  | (16) 20%      |
| (2) \$208.99 | (7) May 8      | (12) \$85.50 | (17) \$2,200  |
| (3) \$1.70   | (8) \$567.45   | (13) \$22    | (18) \$16,560 |
| (4) 24%      | (9) \$10.45    | (14) \$3,500 | (19) \$156.65 |
| (5) \$637.83 | (10) \$788     | (15) \$203   | (20) \$46.50  |

#### 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) \$912    | [2] | (25) 16      | [2] | (29) 26,000    |
| (22) Aug. 7   | [2] | (26) \$.14   | [2] | (30) 40%       |
| Group 2       |     | Group 4      |     | (31) \$920,000 |
| (23) \$105    | [2] | (27) \$1,600 | [2] | (32) 6,000     |
| (24) \$.1,100 | [2] | (28) \$37.10 | [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, 1965*.]

- |              |     |               |     |               |     |
|--------------|-----|---------------|-----|---------------|-----|
| (33) \$3.60  | [6] | (35) \$15.15  | [6] | (37) \$1 over | [6] |
| (34) \$7,680 | [6] | (36) \$669.50 | [6] |               |     |