

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

Monday, June 19, 1967 — 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**

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*Directions (1-17):* Write the correct answer to *each* of the following in the space provided on the separate answer sheet (page 3): [17]

- 1 What is the amount of a 2% sales tax on a desk costing \$250?
- 2 What number is 40% of 150?
- 3 What number is 10% more than 90?
- 4 What is the cost of 640 pens at  $12\frac{1}{2}\phi$  per pen?
- 5 Express the property tax rate of \$.0336 per \$1 as an equal tax rate per \$1,000.
- 6 Write 5.6% as a decimal.
- 7 24 is what percent less than 30?
- 8 What is the exact number of days from September 21 to November 1?
- 9 What is the cost of 24 quarts at \$3 per gallon?
- 10 What percent has the same value as .062? (.62%;  $6\frac{1}{5}\%$ ; 62%; 620%)
- 11 120 is 80% of (96; 150; 216; 960)
- 12 25% of 242 is approximately (40; 50; 60; 70)

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

- 13 \$1,700 for one year at 5%
- 14 \$700 for 120 days at 6%
- 15 \$1,400 for 15 days at 6%
- 16 \$1,915 for 6 days at 6%
- 17 \$1,250 for 60 days at 3%
- 18 What is the total for the following section of a wholesale invoice? [No partial credit.] [3]

<i>Quantity</i>	<i>Description</i>	<i>Unit Price</i>	<i>Amount</i>
40 gal.	Porch paint — #752	\$4.50 per gal.	\$.....
16	Paint brushes — ass'td.	.87 $\frac{1}{2}$ each	.....
200 sheets	Sandpaper — #21	7.50 per C	.....
	Total		\$.....

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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 At the rate of \$2.25 per hour, how many hours would it take a man to earn \$405?
- 2 In a furniture factory, it usually takes  $58\frac{1}{2}$  hours to build a certain cabinet. Recently, the cabinet was finished in  $47\frac{1}{2}$  hours. How much time was saved?
- 3 Express  $\frac{6}{11}$  as a percent, correct to the nearest tenth of a percent.
- 4 Warren's property was valued at \$42,500 and insured for \$36,125. What percent of the value of the property was covered by insurance?
- 5 On January 2, Barnes deposited \$1,500 in a bank that pays 4% interest per year, compounded quarterly. Interest was added to the account on April 1 and July 1. What total amount did he have on deposit on July 1?
- 6 On July 1, White's checkbook balance was \$176.22. In a reconciliation, he found his bank had made a service charge of \$1.12; the same deposit for \$20 had been entered twice in his checkbook; and he had neglected to deduct a check he had written for \$5. What was his correct available checkbook balance?
- 7 On October 1, Barker's bank statement showed a balance of \$3,897.50. Checks for the following amounts were outstanding: \$58.48; \$73.00; \$148.40; \$201.10; \$307.17. What was Barker's correct available bank balance on that date?
- 8 What is the single percent of discount that is equal to the series of 25%, 20%, and 10%?
- 9 An invoice for \$2,500 is dated September 18, with terms of  $\frac{2}{30}, \frac{1}{60}, N/90$ . What is the final date when the full amount of the invoice is to be paid?
- 10 [Write only the *number* preceding the correct answer.] Baldwin paid a total of \$14.28 for a pair of shoes. This price included a 2% sales tax based on the original selling price. To determine the selling price before the sales tax was added, he should
  - 1 divide \$14.28 by .98
  - 2 divide \$14.28 by 1.02
  - 3 multiply \$14.28 by .98
  - 4 multiply \$14.28 by 1.02
- 11 Baker, a salesman, is paid a salary of \$75 per week and a 4% commission on all sales in excess of a weekly quota of \$600. Last week, his sales totaled \$723. What were Baker's gross earnings for the week?
- 12 A purchasing agent bought goods costing \$4,800 for Watson. If the agent charged 5% commission for his work, what amount of money did Watson pay as the total cost of obtaining these goods?
- 13 The 1967 rate for the FICA tax is 4.4% on earnings up to and including \$6,600 a year. This year Roy Thorton has already earned \$7,250. What is the amount of his FICA tax?
- 14 Doris Zimmer is employed by the Eagle Mills and is paid \$.07 $\frac{1}{2}$  for each article completed and accepted. During the last week in April she completed the following:

Monday .....	140
Tuesday .....	146
Wednesday .....	152
Thursday .....	156
Friday .....	148

A total of 12 articles were not accepted.  
What were her gross earnings for that week?

- 15 A house valued at \$30,000 was insured for \$16,000 under a policy containing an 80% coinsurance clause. A fire loss of \$12,000 occurred. What amount of money should the insurance company be expected to pay?
- 16 Mr. Dugan estimated the average annual depreciation on his automobile to be 20% of the cost. If he paid \$3,850 for the car when it was new, what was its estimated value after 3 years of use?
- 17 The cash price of a boat is \$1,600. On the installment plan, the additional charges are 12% of the cash price. What amount of money would a buyer save by borrowing the necessary money at  $5\frac{1}{2}\%$  interest for one year?
- 18 On Jacobs' telephone bill for May, the company's charge was \$5.80 for local service and \$3.25 for toll calls. Both charges were subject to a federal tax of 10% and a city tax of 3%. What was the total amount of the telephone bill, including taxes?
- 19 Stevens owns 65 shares of preferred stock which pays a *quarterly* dividend of \$.45 per share. What amount of money should he receive as dividends during a one-year period?
- 20 Klinet has been renting a house for \$85 a month. He believes that he will save 8% a year by purchasing the house rather than renting it. What will be the amount of Klinet's expected savings in one year?

### 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 following information:

James Barton, in shopping for an electric motor, received the following offers:

The Annex Company offered the motor at \$450 with terms of  $\frac{5}{10}, \frac{N}{60}$ ; the Bolter Company at \$540 less trade discounts of  $16\frac{2}{3}\%$  and  $10\%$ .

- 21 If Barton accepts the offer from the Annex Company, what amount of money would he need for immediate payment of cash? [2]
- 22 If Barton accepts the Bolter Company's offer, what amount of money would Barton need to pay their invoice? [2]

#### Group 2

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

Randolph purchases bowling balls for \$10.26 each. He sells each bowling ball for \$15.39.

- 23 What is Randolph's percent of profit on each bowling ball if he bases the markup on the cost? [2]
- 24 What is Randolph's percent of profit on each bowling ball if he bases the markup on the selling price? [2]

**Group 3**

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

On August 13, James Robby discounted at his bank a customer's 60-day note dated July 24, bearing interest at the rate of  $4\frac{1}{2}\%$ . The face value of the note was \$1,500.

- 25 For how many days would the bank charge discount? [2]

If Robby had held the note himself until maturity, what amount of interest would he have earned? [2]

**Group 4**

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

A contractor building a house submitted the following expenses to the buyer:

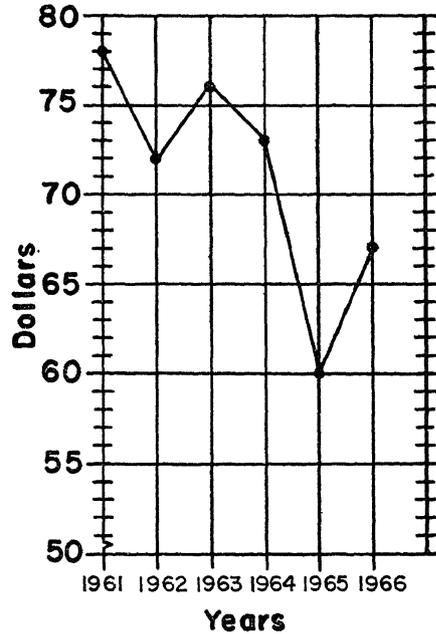
Excavating .....	\$ 575
Lumber & Carpentry .....	19,175
Painting .....	2,530
Plumbing, Heating, & Electrical Work .....	11,122
Other Expenses .....	1,625

- 27 If the contractor added 10% as his profit, what would be the total cost to the buyer for this house? [2]
- 28 This property is assessed at \$17,600. What amount of money will the owner have to pay as property tax if the rate in this area is \$42.50 per \$1,000 of assessed valuation? [2]

**Group 5**

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

**ELCO ELECTRIC CORPORATION**  
**Average Price of a Share of Stock**  
 (In even dollars)  
 1961 - 1966



- 29 What was the average price of a share of Elco Electric Corporation stock for 1965? [1]
- 30 If 15 shares of this stock had been bought at the average price for 1962, what amount of money would have been paid? (Disregard brokerage charges.) [1]
- 31 What was the average selling price of this stock for the six years shown on the graph? [1]
- 32 What was the amount of the decline between the average price in 1961 and the average price in 1966? [1]

Part IV

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

Directions (33): Base your answer to the question on the time card for Alec Wood, who works on the basis of an 8-hour day with time and one-half for overtime at the regular rate of \$1.84 per hour:

Pay period ending – April 30-66							
No. 051-24-7190							
Name <u>Wood, Alec</u>							
Regular hours are from 8:00 to 12:00 and 12:30 to 4:30.							
Allow 3 minutes, early or late, for checking in or out without loss of time.							
Day	In	Out	In	Out	In	Out	Total
Mon.	7:59	12:00	12:29	4:30			
Tues.	8:00	12:00	12:30	4:30	5:00	7:00	
Wed.	7:58	12:01	12:29	4:31			
Thur.	7:59	12:00	12:30	4:30	5:00	7:30	
Fri.	7:58	12:01	12:28	4:31			

33 What was the amount of Wood's gross earnings for this week?

34 When purchasing a fire insurance policy, the rate in a certain community is \$42 per \$100 of coverage. The rate for a 3-year policy is 2.7 times the annual rate. What amount of money is saved by purchasing a single 3-year policy for \$8,500 rather than three 1-year policies for the same coverage?

35 A merchant owns a building which cost \$45,000 and depreciates at the rate of 2% annually. In addition, he has delivery equipment costing \$4,000 with an estimated life of 5 years and an estimated scrap value of \$400. What is the total depreciation expense for one year on both the building and the delivery equipment?

36 Watson and Blume formed a partnership with investments of \$9,000 and \$6,000, respectively. The partnership agreement provided that the net profit would be divided as follows: each partner was to receive 6% interest annually on his investment with the remaining profit to be shared equally. Last year the firm's net profit was \$11,500. What amount did Watson receive as his total share of this net profit?

37 In order to raise money, the junior class in a certain school decided to sell basketball booster buttons. On November 15 the class purchased 3,000 buttons at a cost of \$7.50 per 100, terms  $\frac{2}{10}, \frac{N}{80}$ . On November 22 the treasurer of the class reported that all buttons had been sold at \$.10 each and that a check had been sent to the manufacturer in payment for the buttons. What net profit did the junior class realize in selling these buttons?

# FOR TEACHERS ONLY

## BA

### SCORING KEY BUSINESS ARITHMETIC

Monday, June 19, 1967 — 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  
Regis Hammond — Downsville Central School  
William Mammosser — Irondequoit High School, Rochester  
Arthur Sacks — Sachem High School, Lake Ronkonkoma  
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) \$5     | (10) $6\frac{1}{2}\%$ |
| (2) 60      | (11) 150              |
| (3) 99      | (12) 60               |
| (4) \$80    | (13) \$85             |
| (5) \$33.60 | (14) \$14             |
| (6) .056    | (15) \$3.50           |
| (7) 20%     | (16) \$1.92           |
| (8) 41      | (17) \$6.25           |
| (9) \$18    | (18) \$209            |

#### Part II

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

- |  |               |
|--|---------------|
| (1) 180                                      | (11) \$79.92  |
| (2) $10\frac{7}{10}$ hrs. or 10 hrs. 42 min. | (12) \$5,040  |
| (3) 54.5%                                    | (13) \$290.40 |
| (4) 85%                                      | (14) \$54.75  |
| (5) \$1,530.15                               | (15) \$8,000  |
| (6) \$150.10                                 | (16) \$1,540  |
| (7) \$3,109.35                               | (17) \$104    |
| (8) 46%                                      | (18) \$10.23  |
| (9) December 17                              | (19) \$117    |
| (10) 2                                       | (20) \$81.60  |

[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)	\$427.50 [2]	(25)	40 days [2]	(29)	\$60 [1]
(22)	\$405 [2]	(26)	\$11.25 [2]	(30)	\$1,080 [1]
				(31)	\$71 [1]
				(32)	\$11 [1]
Group 2		Group 4			
(23)	50% [2]	(27)	\$38,529.70 [2]		
(24)	33 $\frac{1}{3}$ % [2]	(28)	\$748 [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)	\$86.02 [6]	(36)	\$5,840 [6]
(34)	\$10.71 [6]	(37)	\$79.50 [6]
(35)	\$1,620 [6]		