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The University of the State of New York
Centennial of Regents Examinations
1865-1965

REGENTS HIGH SCHOOL EXAMINATION

BUSINESS ARITHMETIC

Friday, June 18, 1965 — 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.

Tear Here

BUSINESS ARITHMETIC — *continued*
MENTAL CALCULATION TEST

Directions (1–20): Write the correct answer to *each* of the following on the line at the right. [20]

- 1 Add: 84; 19; 32; $6\frac{1}{2}$ 1.....
 - 2 Subtract: $\begin{array}{r} 721.84 \\ 96.358 \\ \hline \end{array}$ 2.....
 - 3 What would be the cost of 48 quarts at $37\frac{1}{2}\text{¢}$ per quart? 3 \$.....
 - 4 What would be the cost of 25 boxes at 60¢ per box? 4 \$.....
 - 5 48 is $\frac{6}{5}$ of what number? 5.....
 - 6 What is 56 increased by $12\frac{1}{2}\%$ of itself? 6.....
 - 7 What is $\frac{1}{2}\%$ of \$480? 7 \$.....
 - 8 A line one inch long on a certain graph represents \$200. How long a line would be needed to represent \$500 on this same graph? 8.....in.
 - 9 Bailey left Northport at 7:15 a.m. and arrived in Long Beach at 8:40 a.m. If he stopped for 5 minutes to buy gas, what was his actual driving time? 9.....
 - 10 What is the exact number of days between January 12 and February 9? 10.....
 - 11 The fraction $\frac{2}{3}$, when expressed to the nearest *whole* percent, is written ($\frac{2}{3}\%$; $.66\frac{2}{3}\%$; $66\frac{2}{3}\%$; 67%) 11.....
 - 12 The decimal .642, when expressed as a percent, is written as (642% ; 64.2% ; $\frac{642}{1,000}$; $.642\%$) 12.....
 - 13 49.5% , when expressed as a decimal, is written ($.495$; $\frac{495}{1,000}$; 49.5 ; 495) 13.....
 - 14 $.72$ expressed as a common fraction reduced to its lowest terms is $(\frac{72}{100}; \frac{36}{50}; \frac{18}{25}; \frac{9}{25})$ 14.....
 - 15 Which of the following is greater than 60% ? ($.79\%$; $\frac{3}{5}$; $.586$; $\frac{3}{8}$) 15.....
 - 16 15% of 410 is approximately (45; 50; 60; 75) 16.....
- Directions* (17–20): What is the interest on *each* of the following?
- 17 \$480 for 30 days at 6% ? 17 \$.....
 - 18 \$400 for 15 days at 6% ? 18 \$.....
 - 19 \$578.90 for 6 days at 6% ? 19 \$.....
 - 20 \$750 for 60 days at 2% ? 20 \$.....



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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 What is the sum of $38\frac{1}{4}$; $19\frac{3}{8}$; $9\frac{5}{8}$; $8\frac{1}{2}$?
- 2 On five successive days a deliveryman listed his mileage as follows: 64; 138; 92; 28; 56. If his truck averaged 14 miles per gallon of gasoline, how many gallons should he have used during these five days?
- 3 A highway that is to be 49.5 miles long when it is finished has been 62% constructed. How many miles are left to be built?
- 4 A machinist spent $23\frac{1}{2}$ hours working on a part. If he is paid at the rate of \$3.90 per hour, what will be the cost of his labor for the part?
- 5 If Miss Hall earns \$3,770 a year, how much is her weekly pay?
- 6 Interest on savings is paid at the rate of 4% a year, compounded *quarterly*, by the Regional Savings and Loan Association. If Watson's savings account has a balance of \$2,000 on July 1, how much money would be available to him on January 2, six months later?
- 7 What is the interest on \$1,200 for 80 days at $4\frac{1}{2}\%$?
- 8 On October 1, Black's bank statement showed a balance of \$3,162.18. Outstanding checks totaled \$396.73. A deposit of \$146.63, mailed to the bank on September 30, did not appear on the bank statement. What was Black's correct available bank balance on October 1?
- 9 On May 31, Henry Adams had a checkbook balance of \$188. When he compared this balance with his bank statement, he found that he had no record on his check-stubs of a service charge of \$1.25, a deposit of \$15 and a check he had written for \$5.49. What is his correct checkbook balance?
- 10 An invoice for goods bought on October 28 has terms of 3/15, 1/30, N/60. What is the last date on which this invoice may be paid in order to get the largest cash discount?

- 11 Aluminum screening can be bought at 48¢ a running foot, or by the 100-foot roll for a total cost of \$43.20. What percent of discount is allowed for buying in quantity?
- 12 The cost of a dart game is 60% of the selling price. The selling price is \$3.50. Indicate the cost by using the code word GRAPEFRUIT for the figures 1 through 0.
- 13 During the first week in September, Ralph sold 72 aluminum storm windows at \$17.25 each. How much did he earn if his rate of commission was 20% of sales?
- 14 Mr. Thomas, a salesman, received a salary of \$75 a week and a commission of 5% of his net sales. Last week his gross sales were \$1,150 and customer returns amounted to \$225. How much did Mr. Thomas earn?
- 15 Base your answer to this question on the information given below:

FICA Tax Table — $3\frac{1}{8}\%$

Wages		FICA Tax
At least	But less than	To be withheld
\$48.14	\$48.42	\$1.75
48.42	48.69	1.76
48.69	48.97	1.77
48.97	49.25	1.78
49.25	49.52	1.79
49.52	49.80	1.80
49.80	50.07	1.81
50.07	50.35	1.82
50.35	50.63	1.83
50.63	50.90	1.84
50.90	51.18	1.85

The payroll record of the Brite Laundry showed the following information for the week ending January 24:

Employee	Gross earnings
R. Hutton	\$50.00
M. Lyons	48.75
J. Moore	49.25
C. Peterson	50.90

What was the total FICA tax withheld for this payroll period?

16 [Write the *number* preceding the correct method.]
The 5-year rate for fire insurance is 4.4 times the annual rate. To determine the premium on \$5,500 worth of insurance for 5 years at an annual rate of 40¢ per \$100, which procedure would be used?

(1)
$$\frac{\$5,500 \times 4.4}{100}$$

(2)
$$\$5,500 \times 100 \times \$40 \times 4.4$$

(3)
$$\frac{\$5,500 \times \$40 \times 4.4}{100}$$

(4)
$$\frac{\$5,500 \times \$40 \times \frac{1}{4.4}}{100}$$

17 The average annual depreciation on an adding machine is \$37.92. If the machine cost \$252.80 when new, what is the value of the adding machine after four years of use?

18 Mrs. Julian purchased a living room suite on the installment plan for a total cost of \$480. She paid 15% of the total cost as a down payment and promised to pay the unpaid balance in 15 equal monthly installments. What will be the amount of each monthly payment?

19 Mr. Harper's monthly expenses for utilities were as follows:

Telephone	\$ 7.65
Water	2.08
Electricity	15.37
Gas	3.90

What percent of the total cost of these utilities is being spent for electricity?

20 Mr. Curtis purchased a house and lot with a total assessed valuation of \$4,200. The property tax rate in his community is \$35.20 per \$1,000 of assessed valuation. What amount of money should he expect to pay for property taxes?

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:

Wagner insured an office building for \$13,000 with the Rome Fire Insurance Company, for \$26,000 with the Batavia Fire Insurance Company and for \$39,000 with the Kingston Fire Insurance Company. A fire loss of \$38,520 occurred.

21 What amount of money should Wagner collect from the Rome Fire Insurance Company? [2]

22 If the three insurance companies charge the same premium rate, \$.54 per \$100, what is Wagner's total cost of insurance? [2]

Group 2

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

A school purchased 20 typewriters at a cost of \$150 each. Five years later a trade-in allowance of \$40 each was allowed when 20 new machines were purchased for \$160 each.

23 What was the amount of average annual depreciation per typewriter on the first group of typewriters purchased? [2]

24 What was the total amount of money to be paid for the second group of typewriters in addition to the trade-in allowance? [2]

Group 3

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

A 4-month promissory note for \$900, dated June 1 and bearing interest at the rate of 6%, was discounted at a bank on August 10.

- 25 What was the maturity value of the note? [2]
- 26 What was the number of days for which the bank charged discount? [2]
-

Group 4

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

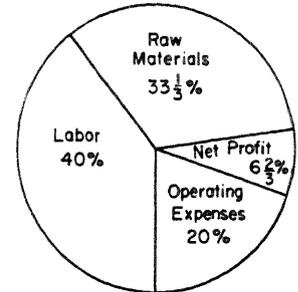
Sparr invested \$15,000 and Chase invested \$25,000 in a retail paint business. In May, the partnership made a net profit of \$6,488.

- 27 What amount of money would Sparr receive as his share of the net profit for May if the partners share profits in proportion to their investments? [2]
- 28 If Sparr receives a monthly salary of \$750 and Chase a monthly salary of \$1,250, with any remaining profit to be divided equally, what is the total amount of money that Sparr would receive? [2]
-

Group 5

Directions (29–32): Base your answers to questions 29 through 32 on the information below:

Good Manufacturing Company
Distribution for Sales
of \$240,000
1965



The annual sales of the Good Manufacturing Company amounted to \$240,000. The graph shows how each sales dollar is used.

- 29 What amount of money was spent for labor? [1]
- 30 What was the amount of money earned as net profit? [1]
- 31 If the gross profit may be found by subtracting raw materials and labor from sales, what is the amount of the gross profit? [1]
- 32 Next year sales are expected to increase by 8%. What should the expected sales amount to next year? [1]
-

➡ GO RIGHT ON TO THE NEXT PAGE.

Part IV

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

33 A retailer purchased 230 suits for \$5,060. He sold 120 at \$28 each, 70 at \$24 each and the remainder at \$17.75 each. What percent of profit based on the selling price did the retailer make? [6]

34 Mr. Gibson purchased 50 shares of stock at a cost of \$28 per share, plus brokerage fees of \$20 on the entire transaction. He kept the stock two years, during which time he received regular quarterly dividends of \$.50 per share. He sold the stock and received \$1,325.50, after all expenses had been paid. How much was Gibson's net gain in this stock transaction? [6]

35 Smith purchased a house for \$9,600 cash and immediately rented it to a tenant for \$80 a month, on a two-year lease. At the end of two years, Smith sold the house for \$10,700. Total expenses on the property during the two years amounted to \$1,580. What was the percent of net gain on Smith's original investment? [6]

36 Mr. McNeil works on an 8-hour-per-day basis with time and one-half for all work over 8 hours. His regular hourly rate of pay is \$2.24. Last week he worked the following hours:

Employee	M	T	W	T	F
McNeil, J.	8	7½	10	9	8

Mr. McNeil's employer deducted the following items from his gross earnings:

Federal income taxes.....	\$12.20
State income taxes.....	2.40
FICA taxes	3.57
Insurance	2.15

What was the amount of Mr. McNeil's net take-home pay? [6]

37 Mr. Dunn purchased the merchandise listed below:

MONTGOMERY MANUFACTURING COMPANY			
Troy, New York			
May 1, 1965			
Sold to: Joseph Dunn 145 Main Street Hudson, New York			
Terms: 2/10, 1/15, N/30			
Quantity	Description	Unit Price	Total Amount
4	Electric Ranges #EH-243	@ \$229.95 each	— —
3	Portable Dishwashers #KY-167	@ \$152.40 each	— —

For what amount of money did Mr. Dunn write his check on May 8, 1965, in full payment of this purchase? [6]



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 1865 - 1965

FOR TEACHERS ONLY

BA

SCORING KEY BUSINESS ARITHMETIC

Friday, June 18, 1965 — 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 Mammosser — 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 the following: [Allow no partial credit.]

- | | | | |
|-------------------------------|--------------------------------------|----------------------|-------------|
| (1) $141\frac{1}{2}$ or 141.5 | (6) 63 | (11) 67% | (16) 60 |
| (2) 625.482 | (7) \$2.40 | (12) 64.2% | (17) \$2.40 |
| (3) \$18 | (8) 2.5 or $2\frac{1}{2}$ | (13) .495 | (18) \$1.00 |
| (4) \$15 | (9) 1 hr. 20 min.
(or equivalent) | (14) $\frac{18}{25}$ | (19) \$.58 |
| (5) 40 | (10) 28 | (15) $\frac{1}{8}$ | (20) \$2.50 |

Part II

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

- | | | | |
|----------------------|----------------|---------------|---------------|
| (1) $76\frac{1}{24}$ | (6) \$2,040.20 | (11) 10% | (16) 3 |
| (2) 27 | (7) \$12.00 | (12) RGT | (17) \$101.12 |
| (3) 18.81 or 18.8 | (8) \$2,912.08 | (13) \$248.40 | (18) \$27.20 |
| (4) \$91.65 | (9) \$196.26 | (14) \$121.25 | (19) 53% |
| (5) \$72.50 | (10) Nov. 12 | (15) \$7.22 | (20) \$147.84 |

[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)	\$6,420 [2]	(25)	\$918 [2]	(29)	\$96,000 [1]
(22)	\$421.20 [2]	(26)	52 days [2]	(30)	\$16,000 [1]
				(31)	\$64,000 [1]
Group 2		Group 4		(32)	\$259,200 [1]
(23)	\$22.00 [2]	(27)	\$2,433 [2]		
(24)	\$2,400 [2]	(28)	\$2,994 [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)	12% [6]	(35)	15% [6]	(37)	\$1,349.46 [6]
(34)	\$105.50 [6]	(36)	\$78.24 [6]		