

**KEY TO COMPLETE
BUSINESS
ARITHMETIC**

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Key to Complete Business Arithmetic by George H. Van Tuyl

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GEORGE H. VAN TUYL

**KEY TO COMPLETE
BUSINESS
ARITHMETIC**

KEY TO COMPLETE BUSINESS ARITHMETIC

BY

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FORMERLY TEACHER OF ARITHMETIC IN THE ALBANY BUSINESS COLLEGE
ALBANY, N. Y., AND IN THE PACKARD COMMERCIAL SCHOOL
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KEY TO COMPLETE BUSINESS ARITHMETIC

W. P. 4

KEY TO VAN TUYL'S COMPLETE BUSINESS ARITHMETIC

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34.	35.	36.	37.	38.	39.
\$ 2.08	\$ 2.56	\$ 5.46	\$ 7.46	\$ 1.63	\$ 3.65
2.73	3.61	5.93	4.04	2.36	2.18
4.21	3.97	4.14	4.74	4.80	5.00
4.40	3.49	1.88	2.60	4.37	1.64
2.41	2.78	2.23	4.22	4.17	3.28
3.90	4.59	2.72	7.46	2.12	5.24
<u>\$19.82</u>	<u>\$21.00</u>	<u>\$22.96</u>	<u>\$30.62</u>	<u>\$19.44</u>	<u>\$20.97</u>

40.	41.	42.
\$ 3.27	\$ 1.97	\$ 2.11
3.88	2.37	3.08
2.04	4.33	6.80
6.25	8.66	4.15
5.08	20.02	3.15
7.70	8.31	1.60
<u>\$20.12</u>	<u>\$45.66</u>	<u>\$21.74</u>

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§ 227.	1.	2.	3.	4.	5.	6.
\$ 422.50	\$ 7.88	\$ 1562.50	\$.38	\$.77	\$ 23.25	
637.50	3.58	2402.50	1.69	1.15	5.25	
3.38	.56	1402.50	.67	21.56	46.25	
8.08	.54	1537.50	.96	60.56	28.25	
<u>\$1071.46</u>	<u>\$12.56</u>	<u>\$6005.00</u>	<u>\$8.70</u>	<u>\$84.04</u>	<u>\$104.00</u>	

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NAMES OF EMPLOYEES	TIME		WAGES		TOTAL
	Regular	Overtime	Regular	Overtime	
	Hours	Hours			
James Addison	48	7	\$27.00	\$4.92	\$31.92
Henry Buell	48	3 $\frac{1}{2}$	24.00	2.19	26.19
John Crane	48	4 $\frac{1}{2}$	24.00	2.81	26.81
William Crawford . . .	48	10	21.00	6.47	26.47
Albert Jones	48	9	19.50	4.57	24.07
Frank Landis	48	4	18.00	1.88	19.88
Theodore Money	48	6	18.00	2.81	20.81
James Newton	48	5	18.00	2.34	20.34
George Orton	48	5	16.50	2.16	18.66
Thomas Rooney	48	8	15.00	3.13	18.13
			Total		\$283.27

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24. $\frac{1}{2}$ of marked price = marked price.
 $\frac{1}{2}$ of marked price = discount.
 $\frac{1}{2}$ of marked price = selling price.
 $\frac{1}{2}$ of ? = \$4.50.
 $\$4.50 \div \frac{1}{2} = \9.00 , marked price.
 $\frac{1}{2}$ of cost = cost.
 $\frac{1}{2}$ of cost = gain before marking down.
 $\frac{1}{2}$ of cost = marked price.
 $\frac{1}{2}$ of ? = \$6.00.
 $\$6.00 \div \frac{1}{2} = \12.00 , cost.
 $\$4.50 - \$4.00 = \$0.50$, gain after marking down.
 $\$0.50 = ? \times \4.00 .
 $\$0.50 \div \$4.00 = \frac{1}{8} = 12\frac{1}{2}\%$, part gained.

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25. $868\frac{1}{2} \times \frac{1}{2} \times \$0.14\frac{1}{2} = \$62.10$, selling price of $\frac{1}{2}$.
 $868\frac{1}{2} \times \frac{1}{4} \times \$0.12\frac{1}{2} = \$34.01$, selling price of $\frac{1}{4}$.
 $\$62.10 + \$34.01 = \$96.11$, selling price of all.
26. $6 \times 8 \times \$0.27\frac{1}{2} = \13.20 , weekly wages.
 $\$13.20 - \$6.60 = \$6.60$, weekly savings.
 $13\frac{1}{2} \times \$38.50 = \518.75 , cost of land.
 $\$518.75 \div \$6.60 = 78\frac{1}{2}$ weeks = 78 wk. 2 hr.

$$35. \$1.45 + \$1.87 + \$1.92 + \$2.03 + \$1.84 + \$1.75 + \$1.76 + \$1.84$$

$$+ \$2.06 + \$2.80 + \$2.47 + \$2.28 = \$24.07.$$

$$\$24.07 \div 12 = \$2.00\frac{7}{12}, \text{ or } \$2.01, \text{ average price.}$$

$$\$2.01 - \$1.45 = \$.56, \text{ increase.}$$

$$.56 = ? \times \$1.45.$$

$$.56 \div \$1.45 = \frac{4}{13}, \text{ or more than } \frac{1}{3} \text{ greater than first price.}$$

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36.

CLASS	TIME		WAGES		TOTAL
	Regular	Overtime	Regular	Overtime	
#1.	48	7½	\$16.50	\$3.12	\$19.62
#2.	48	6	15.00	2.84	17.84
#3.	48	2½	20.00	1.30	21.30
#4.	48	4½	18.00	2.23	20.23
#5.	48	1	14.50	.38	14.88
#6.	48	4	16.00	1.67	17.67
#7.	48	5½	17.00	2.43	19.43
#8.	48	4	19.50	2.03	21.53
					\$152.00

$$\#1. \frac{7\frac{1}{2} \times \$16.50 \times 5}{48 \times 4} = \$3.12, \text{ extra pay for \#1.}$$

37. 38. 39. 40. 41.

Total Milk . . .	63781 lb.	63114 lb.	63639 lb.	63256 lb.	61247 lb.
Total Cheese . .	5070 lb.	6119 lb.	6084 lb.	5967 lb.	6847 lb.
	@ 11½¢	@ 11½¢	@ 11½¢	@ 10¼¢	@ 11½¢
Total Money . .	\$589.39	\$718.98	\$676.85	\$644.68	\$665.10
Total Expense . .	\$67.13	\$78.99	\$78.55	\$77.46	\$75.59
Pounds Milk to					
1 pound Cheese	10.907	10.314	10.46	10.548	10.475
Ratio97115	1.014	.9401	.8967	.9625
Your Milk	1018 lb.	1166 lb.	1141 lb.	1150 lb.	1074 lb.
Less Cheese . . .				\$10.31	
				8½ lb. .38	
Your Money . . .	\$9.89	\$11.81	\$10.73	\$9.98	\$10.34

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9. 45 men : 7 men :: 9 da. : 12 da.

$$\frac{12 \times 45 \text{ men}}{9} = 60 \text{ men.}$$

60 men - 45 men = 15 men, number of additional men required.

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- § 275. 1. 1st cause : 2d cause :: 1st effect : 2d effect.

75 sheets : 5000 sheets :: 24 lb. : ?.

36'' : 17''.

54'' : 22''.

$$\frac{200}{\cancel{5000}} \times 17 \times 22 \times \frac{4}{24} \text{ lb.} = 307 \text{ lb. 18 oz.}$$

$$\frac{75}{3} \times \frac{36}{9} \times \frac{54}{9}$$

2. 1st cause : 2d cause :: 1st effect : 2d effect.

36 sheets : 3000 sheets :: 2 lb. : ?.

24'' : 8''.

36'' : 12''.

$$\frac{500}{\cancel{3000}} \times 8 \times 12 \times \frac{2}{24} \text{ lb.} = 18 \text{ lb. 8 oz.}$$

$$\frac{36}{3} \times \frac{24}{3} \times \frac{36}{3}$$

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3.	4.	5.
\$ 7.78	\$ 40.00	\$ 90.48
7.08	510.00	119.13
19.23	332.00	66.94
15.68	47.04	130.32
21.02	\$ 929.04	39.53
10.07		418.43
\$80.71		\$ 864.83

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6. 428	7. 25,473	9.	\$ 187.50
<u>873</u>	<u>2,237</u>		272.00
1,301	23,236		1530.00
<u>873</u>	<u>2,237</u>		2300.00
2,174	20,999		<u>925.00</u>
<u>873</u>	<u>2,237</u>		\$ 5214.50
3,047	18,762		
<u>873</u>	<u>2,237</u>		
3,920	16,525		
<u>873</u>	<u>2,237</u>		
4,793	14,288		
<u>873</u>	<u>2,237</u>	10.	\$ 7.50
5,666	12,051		10.00
<u>873</u>	<u>2,237</u>		5.00
6,539	9,814		9.00
<u>873</u>	<u>2,237</u>		<u>2.00</u>
7,412	7,577		\$ 34.49
<u>873</u>	<u>2,237</u>		
8,285	5,340		
<u>873</u>	<u>2,237</u>		
9,158	3,103		
<u>873</u>	<u>2,237</u>		
10,031	896		

Quotient 11, Remainder 866.

- § 280. 1. $6 \times 17 \times \$1.50 = \153.00 , laborers.
 $6 \times 28 \times \$3.60 = \604.80 , mechanics.
 $6 \times 9 \times \$2.25 = \121.50 , teamsters.
 $2 \times \$15 = \30.00 , bookkeepers
 $\$1560 \div 52 = \30.00 , superintendent.
 $\$990.30$, weekly pay roll.

3. $\frac{1}{4}$ of $\frac{1}{2}$ of the mine = $\frac{1}{8}$ of the mine, part sold.
 $\frac{1}{8}$ of the mine = \$1710.
 $\$1710 + \frac{1}{8} = \8648 , value of mine.