



LIFE·PAC®

Consumer Math

Solution Key



Alpha Omega Publications

CONSUMER MATH

SOLUTION KEY

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SUGGESTIONS FOR SOLUTION KEY USAGE

This Math Solution Key contains the step-by-step procedures necessary to solve each Section activity and Self Test problem. The solutions are patterned after the models in the LIFEPAcs. However, alternative solutions are often possible and other methods may be used.

The Solution Key is designed to be used by the teacher and student as a resource when the answer in the Answer Key can not be found or when the solution method is not evident. However, excessive reliance on the Solution Key can diminish the learning of the knowledge and reduce the retention of the principles which are necessary to successfully complete the Self Tests and LIFEPAc Tests.

CONSUMER MATHEMATICS 1
SOLUTION KEY

I. SECTION ONE

1.1

+	5	2	1	7	6	3	4	8	9
7	12	9	8	14	13	10	11	15	16
3	8	5	4	10	9	6	7	11	12
8	13	10	9	15	14	11	12	16	17
2	7	4	3	9	8	5	6	10	11
9	14	11	10	16	15	12	13	17	18
1	6	3	2	8	7	4	5	9	10
4	9	6	5	11	10	7	8	12	13
5	10	7	6	12	11	8	9	13	14
6	11	8	7	13	12	9	10	14	15

1.2 7

1.3 17

1.4 27

1.5 37

1.6 10

1.7 20

1.8 30

1.9 60

1.10 12

1.11 22

1.12 32

1.13 82

1.14 11

1.15 21

1.16 31

1.17 51

1.18 80

1.19 81

1.20 82

1.21 83

1.22 90

1.23 91

1.24 92

1.25 93

1.26 100

1.27 101

1.28 102

1.29 103

1.30 100

1.31 101

1.32 102

1.33 103

1.34 13

1.35 15

1.36 12

1.37 14

1.38 9

1.39 17

1.40 19

1.41 19

1.42 21

1.43 17

1.44 23

1.45 26

1.102	13	1.129	43
1.103	23	1.130	56
1.104	33	1.131	34
1.105	3	1.132	7
1.106	13	1.133	19
1.107	23	1.134	41
1.108	53	1.135	50
1.109	8	1.136	31
1.110	18	1.137	34
1.111	28	1.138	18
1.112	48	1.139	35
1.113	5	1.140	48
1.114	15	1.141	49
1.115	35	1.142	67
1.116	75	1.143	11
1.117	20	1.144	533
1.118	19	1.145	513
1.119	18	1.146	747
1.120	40	1.147	704
1.121	39	1.148	808
1.122	38	1.149	521
1.123	70	1.150	798
1.124	69	1.151	738
1.125	68	1.152	406
1.126	90	1.153	319
1.127	89	1.154	410
1.128	88	1.155	174

1.156	466	1.177	180
1.157	45	1.178	368
1.158	414	1.179	729
1.159	349	1.180	108
1.160	412	1.181	216
1.161	234	1.182	124
1.162	338	1.183	360
1.163	197	1.184	568
1.164	168	1.185	279
1.165	54	1.186	328
1.166	1,771	1.187	637
1.167	2,782	1.188	106
1.168	1,877	1.189	48
1.169	3,906	1.190	216
1.170	66,037	1.191	161
1.171	2,725	1.192	175
1.172	806	1.193	666
1.173	2,061	1.194	704
1.174	1,766	1.195	315
1.175	18,989	1.196	584

1.176

x	3	0	2	6	4	9	7	1	8	5
1	3	0	2	6	4	9	7	1	8	5
5	15	0	10	30	20	45	35	5	40	25
3	9	0	6	18	12	27	21	3	24	15
9	27	0	18	54	36	81	63	9	72	45
8	24	0	16	48	32	72	56	8	64	40
6	18	0	12	36	24	54	42	6	48	30
2	6	0	4	12	8	18	14	2	16	10
4	12	0	8	24	16	36	28	4	32	20
7	21	0	14	42	28	63	49	7	56	35
0	0	0	0	0	0	0	0	0	0	0

1.197	285
1.198	558
1.199	340
1.200	696
1.201	384
1.202	228
1.203	392
1.204	290

1.205 102
 1.206 144
 1.207 756
 1.208 396
 1.209 78
 1.210 114
 1.211 288
 1.212 273
 1.213 2,583
 1.214 3,132
 1.215 37,488
 1.216 27,852
 1.217 24,836
 1.218 5,652
 1.219 4,195
 2.220 26,033
 1.221 66,536
 1.222 35,180
 1.223 320
 1.224 1,080
 1.225 920
 1.226 2,100
 1.227 740
 1.228 2,640
 1.229 16
 23
 48
 32
 368

1.230 54
 24
 216
 108
 1296
 1.231 23
 47
 161
 92
 1081
 1.232 35
 65
 175
 210
 2275
 1.233 74
 19
 666
 74
 1406
 1.234 88
 38
 704
 264
 3344
 1.235 74
 39
 666
 222
 2886
 1.236 58
 17
 406
 58
 986
 1.237 64
 27
 448
 128
 1728
 1.238 68
 91
 68
 612
 6188

$$\begin{array}{r}
 117 \text{ R4} \\
 1.273 \quad 8 \overline{)940} \\
 \underline{8} \\
 14 \\
 \underline{8} \\
 60 \\
 \underline{56} \\
 4
 \end{array}$$

$$\begin{array}{r}
 58 \text{ R1} \\
 1.274 \quad 2 \overline{)117} \\
 \underline{10} \\
 17 \\
 \underline{16} \\
 1
 \end{array}$$

$$\begin{array}{r}
 98 \text{ R1} \\
 1.275 \quad 5 \overline{)491} \\
 \underline{45} \\
 41 \\
 \underline{40} \\
 1
 \end{array}$$

$$\begin{array}{r}
 93 \text{ R2} \\
 1.276 \quad 9 \overline{)839} \\
 \underline{81} \\
 29 \\
 \underline{27} \\
 2
 \end{array}$$

$$\begin{array}{r}
 157 \text{ R1} \\
 1.277 \quad 3 \overline{)472} \\
 \underline{3} \\
 17 \\
 \underline{15} \\
 22 \\
 \underline{21} \\
 1
 \end{array}$$

$$\begin{array}{r}
 79 \text{ R5} \\
 1.278 \quad 6 \overline{)479} \\
 \underline{42} \\
 59 \\
 \underline{54} \\
 5
 \end{array}$$

$$\begin{array}{r}
 98 \text{ R5} \\
 1.279 \quad 8 \overline{)789} \\
 \underline{72} \\
 69 \\
 \underline{64} \\
 5
 \end{array}$$

$$\begin{array}{r}
 208 \text{ R2} \\
 1.280 \quad 4 \overline{)834} \\
 \underline{8} \\
 034 \\
 \underline{32} \\
 2
 \end{array}$$

$$\begin{array}{r}
 121 \text{ R1} \\
 1.281 \quad 6 \overline{)727} \\
 \underline{6} \\
 12 \\
 \underline{12} \\
 07 \\
 \underline{6} \\
 1
 \end{array}$$

$$\begin{array}{r}
 95 \text{ R2} \\
 1.282 \quad 3 \overline{)287} \\
 \underline{27} \\
 17 \\
 \underline{15} \\
 2
 \end{array}$$

$$\begin{array}{r}
 66 \text{ R3} \\
 1.283 \quad 4 \overline{)267} \\
 \underline{24} \\
 27 \\
 \underline{24} \\
 3
 \end{array}$$

$$\begin{array}{r}
 97 \text{ R1} \\
 1.284 \quad 7 \overline{)680} \\
 \underline{63} \\
 50 \\
 \underline{49} \\
 1
 \end{array}$$

$$\begin{array}{r}
 96 \text{ R8} \\
 1.285 \quad 9 \overline{)872} \\
 \underline{81} \\
 62 \\
 \underline{54} \\
 8
 \end{array}$$

$$\begin{array}{r}
 233 \text{ R2} \\
 1.286 \quad 4 \overline{)934} \\
 \underline{8} \\
 13 \\
 \underline{12} \\
 14 \\
 \underline{12} \\
 2
 \end{array}$$

$$\begin{array}{r}
 108 \text{ R2} \\
 1.300 \quad 9 \overline{)974} \\
 \underline{9} \\
 074 \\
 \underline{72} \\
 2
 \end{array}$$

$$\begin{array}{r}
 63 \text{ R3} \\
 1.301 \quad 9 \overline{)570} \\
 \underline{54} \\
 30 \\
 \underline{27} \\
 3
 \end{array}$$

$$\begin{array}{r}
 247 \text{ R2} \\
 1.302 \quad 3 \overline{)743} \\
 \underline{6} \\
 14 \\
 \underline{12} \\
 23 \\
 \underline{21} \\
 2
 \end{array}$$

$$\begin{array}{r}
 81 \text{ R3} \\
 1.303 \quad 4 \overline{)327} \\
 \underline{32} \\
 07 \\
 \underline{4} \\
 3
 \end{array}$$

$$\begin{array}{r}
 136 \text{ R4} \\
 1.304 \quad 5 \overline{)684} \\
 \underline{5} \\
 18 \\
 \underline{15} \\
 34 \\
 \underline{30} \\
 4
 \end{array}$$

$$\begin{array}{r}
 130 \text{ R4} \\
 1.305 \quad 7 \overline{)914} \\
 \underline{7} \\
 21 \\
 \underline{21} \\
 04
 \end{array}$$

$$\begin{array}{r}
 82 \text{ R2} \\
 1.306 \quad 8 \overline{)658} \\
 \underline{64} \\
 18 \\
 \underline{16} \\
 2
 \end{array}$$

$$\begin{array}{r}
 128 \text{ R1} \\
 1.307 \quad 6 \overline{)769} \\
 \underline{6} \\
 16 \\
 \underline{12} \\
 49 \\
 \underline{48} \\
 1
 \end{array}$$

$$\begin{array}{r}
 117 \text{ R5} \\
 1.308 \quad 8 \overline{)941} \\
 \underline{8} \\
 14 \\
 \underline{8} \\
 61 \\
 \underline{56} \\
 5
 \end{array}$$

$$\begin{array}{r}
 208 \text{ R1} \\
 1.309 \quad 2 \overline{)417} \\
 \underline{4} \\
 017 \\
 \underline{16} \\
 1
 \end{array}$$

$$\begin{array}{r}
 158 \text{ R1} \\
 1.310 \quad 5 \overline{)791} \\
 \underline{5} \\
 29 \\
 \underline{25} \\
 41 \\
 \underline{40} \\
 1
 \end{array}$$

$$\begin{array}{r}
 80 \text{ R6} \\
 1.311 \quad 9 \overline{)726} \\
 \underline{72} \\
 06
 \end{array}$$

II. SECTION TWO

2.1 Since the digits are odd, they must be 1, 3, 5, 7, or 9.

If the last two digits add to make 10, they must be 1 and 9, 3 and 7, or 5 and 5.

If the first and last digits add to make 8, they must be 1 and 7 or 3 and 5.

2.1 cont.

So far the possible combinations are

7	9	1
1	3	7
5	7	3
<u>3</u>	<u>5</u>	<u>5</u>

Since 9 is larger than 8, the 1 and then 9 can be crossed out.

If the first two digits add to make 12, they must be 3 and 9 or 5 and 7.

The only combination whose first two digits add to make 12 is 573. Therefore, *S* is 573.

- 2.2 The numbers that add to make 20 are 1 and 19, 2 and 18, 3 and 17, 4 and 16, 5 and 15, 6 and 14, 7 and 13, 8 and 12, 9 and 11, and 10 and 10. The two numbers that have a difference of 4 are 8 and 12.

- 2.3 12, 24

- 2.4 Across

1. 1533
2. $5 \times 3239 = 16195$

Down

1. $173 + 1533 = 1706$
3. $1533 + 1706 = 3239$

2.5 through 2.12

Rectangle stamps:

2.8, 2.9, and 2.11 = 24¢

Rectangle stamps with animals:

2.8 and 2.11 = 16¢

2.5 through 2.12 cont.

Triangle stamps:

2.10 and 2.12 = 24¢

Square stamps:

2.5, 2.6, and 2.7 = 11¢

Stamps with animals:

2.6, 2.8, and 2.11 = 20¢

Stamps with two animals:

2.6 and 2.11 = 13¢

Stamps with a person:

2.9 and 2.12 = 22¢

Stamps with mechanical devices:

2.5, 2.9, and 2.10 = 20¢

Stamp 2.9 = 24¢ - 16¢ = 8¢

Stamp 2.12 = 22¢ - Stamp 2.9
= 22¢ - 8¢
= 14¢

Stamp 2.10 = 24¢ - Stamp 2.12
= 24¢ - 14¢
= 10¢

Stamp 2.5 = 20¢ - (Stamp 2.9 + Stamp 2.10)
= 20¢ - (8¢ + 10¢)
= 20¢ - 18¢
= 2¢

Stamp 2.6 = 20¢ - (Stamp 2.8 + Stamp 2.11)
= 20¢ - 16¢
= 4¢

Stamp 2.7 = 11¢ - (Stamp 2.5 + Stamp 2.6)
= 11¢ - (2¢ + 4¢)
= 11¢ - 6¢
= 5¢

Stamp 2.11 = 13¢ - Stamp 2.6
= 13¢ - 4¢
= 9¢

Stamp 2.8 = 16¢ - Stamp 2.11
= 16¢ - 9¢
= 7¢

- 2.13 true
- 2.14 false
- 2.15 true
- 2.16 true
- 2.17 false
- 2.18 false
- 2.19 true
- 2.20 true
- 2.21 through 2.30 Examples:
- 2.21 1, 2, 3, 4, 6, 8, 12, or 24
- 2.22 1, 2, 3, 4, 6, 8, 12, or 24
- 2.23 1, 2, 4, 7, 14, or 28
- 2.24 1, 3, 11, or 33
- 2.25 1, 2, 4, 8, 16, 32, or 64
- 2.26 4, 8, 12, . . .
- 2.27 15, 30, 45, . . .
- 2.28 1, 7, 11, or 77
- 2.29 a. 1, 2, 4, 8, 16, 32,
or 64
b. 1, 2, 4, 8, 16, 32,
or 64
- 2.30 63, 126, 189, . . .
- 2.31 true
- 2.32 true
- 2.33 false
- 2.34 true
- 2.35 true
- 2.36 false
- 2.37 false
- 2.38 true
- 2.39 true
- 2.40 Any order:
a. 1
b. 3
c. 5
d. 15
- 2.41 Any order:
a. 1
b. 2
c. 4
d. 5
e. 10
f. 20
- 2.42 31 or 37
- 2.43 41 or 43
- 2.44 47
- 2.45 2, 7
- 2.46 Any order:
a. 2
b. 5
- 2.47 Any order:
a. 2
b. 3
c. 5
- 2.48 5
- 2.49 The factors of 28 are 1, 2, 4, 7, 14, and 28.
The prime factors are 2 and 7, of which 7 is the largest.
- 2.50 The factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24.
The prime factors are 2 and 3, of which 3 is the largest.

- 2.51 The factors of 7 are 1 and 7.
The largest prime factor is 7.
- 2.52 The factors of 33 are 1, 3,
11, and 33.
The prime factors are 3 and 11,
of which 11 is the largest.
- 2.53 The factors of 34 are 1, 2,
17, and 34.
The prime factors are 2 and 17,
of which 17 is the largest.
- 2.54 The factors of 32 are 1, 2,
4, 8, 16, and 32.
The largest prime factor is 2.

III. SECTION THREE

$$\begin{array}{r} 3.1 \quad 796 \\ \quad 3486 \\ + 56975 \\ \hline 61257 \end{array}$$

$$\begin{array}{r} 3.2 \quad 364 \\ + 289 \\ \hline 653 \end{array}$$

$$\begin{array}{r} 3.3 \quad 184 \\ + 348 \\ \hline 532 \end{array}$$

$$\begin{array}{r} 3.4 \quad 312 \\ \quad 431 \\ + 551 \\ \hline 1294 \end{array}$$

$$\begin{array}{r} 3.5 \quad 167 \\ \quad 208 \\ + 221 \\ \hline 596 \end{array}$$

$$\begin{array}{r} 3.6 \quad 587 \\ - 104 \\ \hline 483 \end{array}$$

$$\begin{array}{r} 3.7 \quad 596 \\ - 280 \\ \hline 316 \end{array}$$

$$\begin{array}{r} 3.8 \quad 764 \\ - 443 \\ \hline 321 \end{array}$$

$$\begin{array}{r} 3.9 \quad 829 \\ - 564 \\ \hline 265 \end{array}$$

$$\begin{array}{r} 3.10 \quad 213 \\ \quad 462 \\ \quad 381 \\ + 296 \\ \hline 1352 \end{array}$$

$$\begin{array}{r} 3.11 \quad 877 \\ - 382 \\ \hline 495 \end{array}$$

$$\begin{array}{r} 3.12 \quad 6118 \\ - 2873 \\ \hline 3245 \end{array}$$

$$\begin{array}{r} 3.13 \quad 234 \\ - 186 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 3.14 \quad 39 \\ + 57 \\ \hline 96 \end{array}$$

$$\begin{array}{r} 3.15 \quad \$ 438 \quad \$3468 \\ + 938 \quad - 1376 \\ \hline \$1376 \quad \$2092 \end{array}$$

$$\begin{array}{r} 3.16 \quad 684 \\ + 279 \\ \hline 963 \end{array}$$

$$\begin{array}{r} 3.17 \quad 2876 \\ + 5491 \\ \hline 8367 \end{array}$$

$$\begin{array}{r} 3.18 \quad 2139 \\ \quad 8476 \\ + 9347 \\ \hline 19962 \end{array}$$

$$\begin{array}{r} 3.19 \quad 877 \\ - 648 \\ \hline 229 \end{array}$$

$$\begin{array}{r} 3.20 \quad 6542 \\ - 4658 \\ \hline 1884 \end{array}$$

$$\begin{array}{r} 3.21 \quad 7264 \\ - 5837 \\ \hline 1427 \end{array}$$

$$\begin{array}{r} 3.22 \quad 19 \\ \times 46 \\ \hline 114 \\ 76 \\ \hline 874 \end{array}$$

$$\begin{array}{r} 3.23 \quad 34 \\ \times 23 \\ \hline 102 \\ 68 \\ \hline 782 \end{array}$$

$$\begin{array}{r} 3.24 \quad 24 \\ \times 36 \\ \hline 144 \\ 72 \\ \hline 864 \end{array}$$

$$\begin{array}{r} 3.25 \quad a. \quad 57 \\ \times 2 \\ \hline 114 \end{array}$$

$$\begin{array}{r} b. \quad 57 \\ \times 3 \\ \hline 171 \end{array}$$

$$\begin{array}{r} c. \quad 57 \\ \times 7 \\ \hline 399 \end{array}$$

$$\begin{array}{r} 3.26 \quad a. \quad 52 \\ \times 2 \\ \hline 104 \end{array}$$

$$\begin{array}{r} c. \quad 52 \\ \times 12 \\ \hline 104 \\ 52 \\ \hline 624 \end{array}$$

$$\begin{array}{r} d. \quad 52 \\ \times 27 \\ \hline 364 \\ 104 \\ \hline 1404 \end{array}$$

$$\begin{array}{r} e. \quad 146 \\ \times 52 \\ \hline 292 \\ 730 \\ \hline 7592 \end{array}$$

$$\begin{array}{r} 3.27 \quad 17 \\ \times 8 \\ \hline 136 \end{array}$$

$$3.28 \quad 6 \times 9 \times 1 = 54$$

$$3.29 \quad 9 \times 13 \times 1 = 117$$

$$3.30 \quad 1 \times 20 \times 14 = 280$$

$$3.31 \quad 2 \times 20 \times 14 = 560$$

$$3.32 \quad 2 \times 17 \times 1 = 34$$

$$3.33 \quad 2 \times 17 \times 2 = 68$$

$$3.34 \quad 2 \times 17 \times 3 = 102$$

$$3.35 \quad 2 \times 17 \times 9 = 306$$

$$3.36 \quad 8 \times 7 \times 1 = 56$$

$$3.37 \quad 8 \times 7 \times 3 = 168$$

$$3.38 \quad 1 \times 14 \times 15 = 210$$

$$3.39 \quad 2 \times 14 \times 15 = 420$$

$$3.40 \quad 9 \times 14 \times 15 = 1,890$$

$$\begin{array}{r} 3.41 \quad 37 \\ \times 29 \\ \hline 333 \\ 74 \\ \hline 1073 \end{array}$$

$$\begin{array}{r} 3.42 \quad 414 \\ \times 23 \\ \hline 1242 \\ 828 \\ \hline 9522 \end{array}$$

$$\begin{array}{r} 3.43 \quad 34 \\ \times 28 \\ \hline 272 \\ 68 \\ \hline 952 \end{array}$$

$$\begin{array}{r} 3.44 \quad 281 \\ \times 91 \\ \hline 281 \\ 2529 \\ \hline 25571 \end{array}$$

3.77 more than
3 pencils = $3 \times 6 =$
18 paper clips

3.78 more than
2 pencils = $2 \times 6 =$
12 paper clips
 $12 + 2 = 14$ paper clips
14 paper clips = $14 \times 3 =$
42 matches

3.79 less than
22 paper clips = $22 \times 3 =$
66 matches

3.80 more than
5 pencils = $5 \times 6 =$
30 paper clips
30 paper clips = $30 \times 3 =$
90 matches
 $90 + 2 = 92$ matches

3.81 $7 + 8 = 15$
 $15 + 4 = 19$
 $19 - 9 = 10$

3.82 $47 - 9 = 38$
 $38 + 6 = 44$
 $44 - 8 = 36$
 $36 + 3 = 39$
 $39 - 7 = 32$

3.83 $11 + 7 = 18$
 $18 - 9 = 9$
 $9 + 6 = 15$
 $15 - 4 = 11$
 $11 + 9 = 20$

3.84 $28 + 31 = 59$

3.85 $46 + 12 = 58$
 $58 + 8 = 66$

3.86 $32 - 5 = 27$
 $27 + 7 = 34$
 $34 + 8 = 42$
 $42 - 6 = 36$

3.87 $53 + 25 = 78$
 $78 - 9 = 69$

3.88 $320 \times 5 = 1,600$

3.89 $152 \times 7 = 1,064$ for two
motorcycles
 $1,064 \div 2 = 532$

3.90 a. $49 \times 5 = 245$
b. $245 \times 7 = 1,715$

3.91 a. 2 red chips = $2 \times 4 =$
8 white chips
1 blue chip = 7 white chips
 $8 + 7 = 15$ white chips
b. 3 red chips = $3 \times 4 =$
12 white chips
2 blue chips = $2 \times 7 =$
14 white chips
 $12 + 14 = 26$ white chips

3.92 a. 1 purple chip =
 $2 \times 6 = 12$ white chips
b. 3 purple chips =
 $3 \times 2 = 6$ orange chips
6 orange chips =
 $6 \times 6 = 36$ white chips
c. 24 white chips =
 $24 \div 6 = 4$ orange chips
d. 38 orange chips =
 $38 \div 2 = 19$ purple chips

3.93 $5 \times 7 \times 3 = 105$

CONSUMER MATHEMATICS 1
SELF TEST
SOLUTION KEY

SELF TEST 1

- 1.01 278
- 1.02 238
- 1.03 309
- 1.04 2,278
- 1.05 1,734
- 1.06 385
- 1.07 455
- 1.08 184
- 1.09 1,212
- 1.010 1,317
- 1.011 185
- 1.012 426
- 1.013
$$\begin{array}{r} 64 \\ 49 \\ \hline 576 \\ 256 \\ \hline 3136 \end{array}$$
- 1.014 2,862
- 1.015
$$\begin{array}{r} 574 \\ 31 \\ \hline 574 \\ 1722 \\ \hline 17794 \end{array}$$
- 1.016 308
- 1.017 184
- 1.018
$$\begin{array}{r} 56 \\ 82 \\ \hline 112 \\ 448 \\ \hline 4592 \end{array}$$

- 1.019 3,730
- 1.020
$$\begin{array}{r} 602 \\ 145 \\ \hline 3010 \\ 2408 \\ 602 \\ \hline 87290 \end{array}$$
- 1.021 168
- 1.022 2,922
- 1.023
$$\begin{array}{r} 57 \\ 29 \\ \hline 513 \\ 114 \\ \hline 1653 \end{array}$$
- 1.024
$$\begin{array}{r} 45 \\ 72 \\ \hline 90 \\ 315 \\ \hline 3240 \end{array}$$
- 1.025
$$\begin{array}{r} 809 \\ 65 \\ \hline 4045 \\ 4854 \\ \hline 52585 \end{array}$$
- 1.026
$$\begin{array}{r} 99 \text{ R2} \\ 4 \overline{)398} \\ \underline{36} \\ 38 \\ \underline{36} \\ 2 \end{array}$$
- 1.027
$$\begin{array}{r} 2 \text{ R5} \\ 44 \overline{)93} \\ \underline{88} \\ 5 \end{array}$$
- 1.028
$$\begin{array}{r} 5 \\ 75 \overline{)375} \\ \underline{375} \\ 0 \end{array}$$
- 1.029
$$\begin{array}{r} 26 \text{ R19} \\ 24 \overline{)643} \\ \underline{48} \\ 163 \\ \underline{144} \\ 19 \end{array}$$

2.03 cont.

For the second and third digits to add to nine, the third digit must be 3 or 5 ($6 + 3 = 9$; $4 + 5 = 9$).

For the third and fourth digits to add to eleven, the third digit must be 5 and the fourth digit must be 6. Therefore, the first digit must be 3 and the second digit must be 4.

Therefore, $Q = 3,456$.

- a. 3 c. 5
b. 4 d. 6

- 2.04 Since the digits are all the same and they add to 16, each digit must be 4 ($16 \div 4 = 4$). Also, $4 \times 4 = 16$.

Therefore, $F = 4,444$.

- a. 4
b. 4
c. 4
d. 4

- 2.05 The factors of 35 are 1, 5, 7, and 35, of which 7 is the largest prime factor. Therefore, the first digit is 7.

The factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24, of which 2 is the smallest prime factor. Therefore, the third digit is 2.

Since the last digit plus the first digit add to 12, the last digit must be 12 minus the first digit, or 12 minus 7, which equals 5.

The factors of 110 are 1, 2, 5, 10, 11, 22, 55, and 110, of which 5 is the second largest prime number.

Therefore, $Z = 7,525$.

- a. 7
b. 5
c. 2
d. 5

SELF TEST 3

- 3.01 a. $9 \times 7 = 63$
b. $63 \times 2 \times 2 = 252$

- 3.02 $3,323 + 1,621 = 4,944$
 $8,474 - 4,944 = 3,530$

- 3.03 $234 - 186 = 48$

- 3.04
$$\begin{array}{r} 287 \text{ R16} \\ 17 \overline{)4895} \\ \underline{34} \\ 149 \\ \underline{136} \\ 135 \\ \underline{119} \\ 16 \end{array}$$

- 3.05
$$\begin{array}{r} 183 \\ \times 27 \\ \hline 1281 \\ 366 \\ \hline 4941 \end{array}$$

- 3.06 $22 \div 2 = 11$ horses
 $11 \times 3 = 33$ water bottles

- 3.07 a. $5 \times 47 = 235$
b. $235 \times 9 = 2,115$

- 3.08 $2,242 \div 118 = 19$

- 3.09 $9 \times 23 = 207$

- 3.010 a. 12 pencils = $2 \times 2 = 4$ rulers
4 rulers = $4 \times 2 = 8$ erasers
b. 2 erasers = 1 ruler
1 ruler = $6 \div 2 = 3$ pencils
c. 1 ruler = $6 \div 2 = 3$ pencils
4 erasers = $4 \div 2 = 2$ rulers
2 rulers = 6 pencils
 $3 + 6 = 9$ pencils

CONSUMER MATHEMATICS 1
LIFEPAC TEST
SOLUTION KEY

1. $281 \times 94 = 26,414$

2. $834 \times 618 = 515,412$

3.
$$\begin{array}{r} 19 \\ \times 46 \\ \hline 114 \\ 76 \\ \hline 874 \end{array}$$

4.
$$\begin{array}{r} 34 \\ \times 23 \\ \hline 102 \\ 68 \\ \hline 782 \end{array}$$

5.
$$\begin{array}{r} 34 \text{ R1} \\ 7 \overline{)239} \\ \underline{21} \\ 29 \\ \underline{28} \\ 1 \end{array}$$

6. The factors of 56 are 1, 2, 4, 7, 8, 14, 28, and 56.
The largest prime factor is 7.

7. The factors of 34 are 1, 2, 17, and 34. The largest prime factor is 17.

8. $5 \times 7 \times 21 = 735$

9. $54 + 82 = 136$
 $209 - 136 = 73$

10. $208 \div 8 = 26$

11. $10,224 \div 24 = 426$