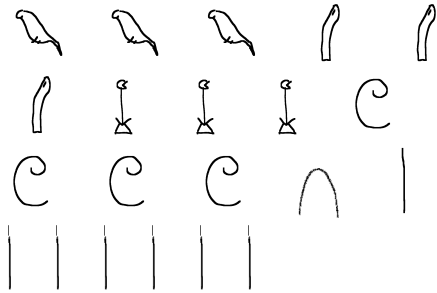


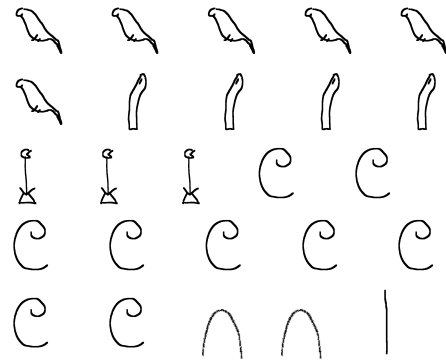
Section 1.1 Odd Answers

- 1. 4241
- 3. 527,062
- 5. 2,013,720
- 7. 1,804,413
- 9. 31,600

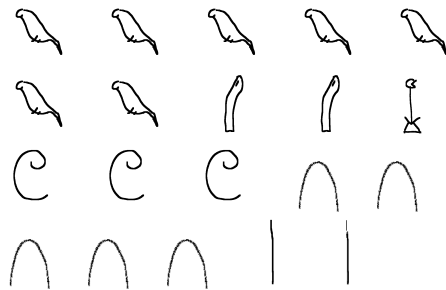
11.



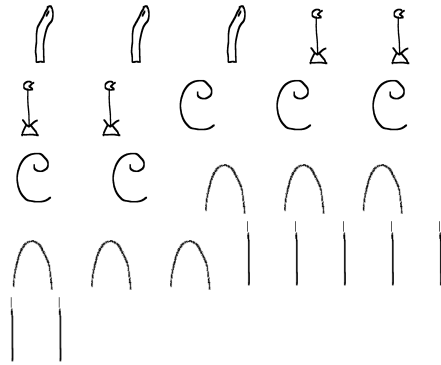
13.



15.



17.



19.



21. 2937

23. 2347

25. 7243

27. 6576

29. 842

31. MMCDLXVII

33. MXXXVI

35. CMXXV

37. MMDCXXXIX

39. MCDLXXXIII

41. (a) 33 (b) 11

43.

(a) 124



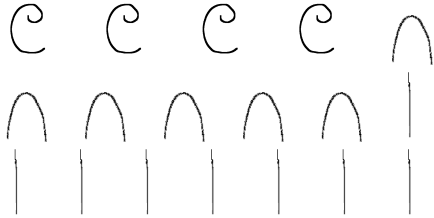
344



(b) 124 = CXXIV, 344 = CCCXLIV

Section 1.1 Odd Answers (continued)

(c) 468

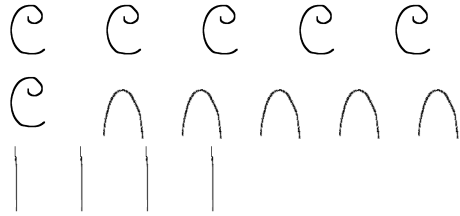


(d) CDLXVIII

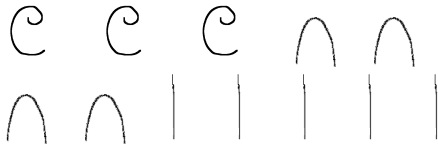
(e) Adding in Egyptian is easier; just combine the symbols.

45.

(a) 654

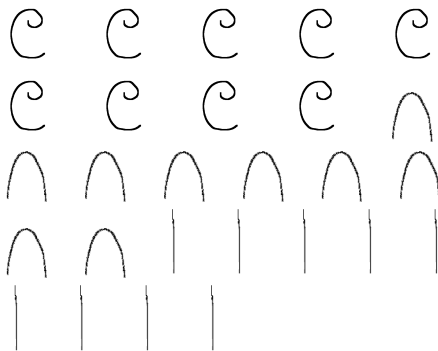


345



(b) 654 = DCLIV, 345 = CCCXLV

(c) 999



(d) 999 = CMXCIX

(e) The Egyptian numbers are easier to add, just combine the symbols.

47. $\times^7 \overline{\text{U}} \overline{\text{U}} \overline{\text{U}} \overline{\text{U}} \overline{\text{K}} \overline{\text{K}} \overline{\text{K}} \overline{\text{K}} \overline{\text{C}} \overline{\text{C}} \overline{\text{C}} \overline{\text{C}} \blacklozenge \blacklozenge \blacklozenge$
 $\blacklozenge \square \square \square \square \square \square \square \square$

49. $\overline{\text{U}} \overline{\text{X}} \overline{\text{X}} \overline{\text{K}} \overline{\text{K}} \overline{\text{K}} \blacklozenge \blacklozenge \blacklozenge \blacklozenge \blacklozenge \blacklozenge \square \square \square \square$

51. 3,111,002

53. 141,235

55. 2,080,325

Section 1.2 Odd Answers

1. 22
3. 658
5. 533
7. 2215
9. 5030
11. υλς
13. τμβ
15. ωκθ
17. δ'τοθ
19. ζ'ρλβ
21. 75
23. 964
25. 501
27. 2159
29. 1325

31.

Section 1.2 Odd Answers (continued)

33. 九
百
二
十
一
35. 一
千
零
四
十
四
37. 七
千
四
百
零
一

39.

四
千
零
五

41. (a) 4 (b) 7

43. (a) $124 = \rho\kappa\delta$, $344 = \tau\mu\delta$
(b) 124

Section 1.3 Odd Answers

1. 152
3. 1238
5. 1879
7. 248
9. 72,827
11. <<<<<| <<<<<<|
13. ||| ||| ||| |||
15. | < <<<| ||| ||| |||
17. || ||| <<<<| ||| ||| |||
19. < <<| || <<<<<<| ||| ||| |||
21. 152
23. 332
25. 1456
27. 2619
29. 4323

Section 1.3 Odd Answers (continued)

(b) 124

31. $\begin{array}{c} \bullet\bullet \\ \hline \end{array}$

$\begin{array}{c} \bullet \\ \hline \bullet\bullet\bullet \end{array}$

33. $\begin{array}{c} \bullet\bullet\bullet \\ \hline \hline \\ \bullet\bullet\bullet \\ \hline \end{array}$

344 $\begin{array}{c} \bullet\bullet \\ \hline \hline \\ \bullet\bullet\bullet \end{array}$

35. $\begin{array}{c} \bullet \\ \bullet \\ \hline \bullet\bullet \\ \hline \hline \hline \end{array}$

(c) $124 + 344 = 468 =$

$||||| <<<<| |||||$

(d) 468

$\begin{array}{c} \bullet \\ \hline \end{array}$

37. $\begin{array}{c} \bullet\bullet\bullet \\ \hline \hline \\ \bullet\bullet\bullet \\ \hline \end{array}$

$\begin{array}{c} \bullet\bullet\bullet \\ \hline \end{array}$

(e) In Babylonian this sum is simply the symbols combined. No rearranging was necessary, so Babylonian is easier in this case.

39. $\begin{array}{c} \bullet \\ \hline \\ \bullet\bullet\bullet \\ \hline \hline \\ \bullet\bullet\bullet \end{array}$

45.

(a) $654 = < <<<<<| |||$

$345 = ||||| <<<<| ||||$

41. (a) 16 (b) 4

43.

(a) $124 = || |||||$

$344 = ||||| <<<<| ||||$

Section 1.3 Odd Answers (continued)

(b) 654

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345

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(c) 999 =

<| | | | | | <<<| | | | | | | | | |

(d) 999

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45.

(e) Both systems require regrouping for this addition problem, so in the author's opinion, the calculation is of equal difficulty in either system.

Section 1.4 Odd Answers

1. 31_5
3. 1001_5
5. 10030_5
7. 1100_2
9. 101101_2
11. 1111000_2

13. 11001111_2
15. 31_8
17. 103_8
19. 550_8
21. 1155_8
23. 36_{12}
25. 112_{12}
27. 198_{12}
29. 7
31. 43
33. 293
35. 331
37. 9
39. 246
41. 162
43. 204
45. 561

Section 1.5 Odd Answers

1. 13_5
3. 111_5
5. 343_5
7. 1314_5
9. 15_8
11. 53_8
13. 620_8
15. 1416_8
17. 1011_2
19. 11000_2
21. $10B7_{16}$
23. CDF_{16}
25. 3_6
27. 124_6
29. 45_6
31. 105_6
33. 42_9

Section 1.5 Odd Answers (continued)

35. 143_9

37. 336_9

39. 68_9

41.

\times	0	1	2	3
0	0	0	0	0
1	0	1	2	3
2	0	2	10	12
3	0	3	12	21

43.

\times	0	1	2	3	4
0	0	0	0	0	0
1	0	1	2	3	4
2	0	2	4	11	13
3	0	3	11	14	22
4	0	4	13	22	31

45. 112_3

47. 22_5

49. 33_5

51. 30_8

53. 36_8

55. 4_8

57. 2_8

59. 3_5

61. 11_5

63. 11_3

Section 1.6 Odd Answers

1. kg

3. hl

5. dam

7. hg

9. ml

11. 3400 cm

13. 9.003 m

15. 4 dm

17. 0.000153 km

19. 4.4 mg

21. 349.8 mg

23. 84000 g

25. 0.000205 cg

27. 0.459 l

29. 42 l

31. 794200 cl

33. 4.07 ml

35. centimeter

37. kilometer

39. centimeter

41. gram

43. gram

45. milligram

47. deciliter

49. kiloliter

51. liter

53. (d)

55. (b)

57. (d)

59. (b)

61. (c)

63. 24.8°F

65. 104°F

67. 176°F

69. 302°F

71. -17.8°C

73. 8.9°C

75. 32.2°C

77. 148.9°C

79. 1.32 m^2

81. (a) 0.0225 km^2

(b) 225000 m^2

83. (a) $39,375,000\text{ cm}^3$

(b) 39.375 m^3

85. (a) $276,460\text{ cm}^3$

(b) 0.27646 m^3

Section 1.7 Odd Answers

1. 26.04 cm
3. 80.45 km
5. 10.97 m
7. 1.702 m
9. 96.46 in
11. 3.70 ml
13. 2.11 quart
15. 192.21 ml
17. 3.94 kl
19. 15.96 cup
21. 340.2 g
23. 0.00882 ounces
25. 166.0 lb
27. 5783 g
29. 41,108 mg
31. 0.0977 m^3
33. 15.54 ft^3
35. 8.03 m^3
37. 0.0509 m^3
39. 275,554,842 ft^2
41. 619 cm^2
43. 22.2 ft^3
45. (a) 93.5 in^2
(b) 603.23 cm^2
47. 11.15 m^2
49. 105 kilometers per hour
51. \$1.42 per ounce