Answer Key

1. {1, 5, 19, 95 }
2. {1, 7, 13, 91 }
3. {1, 3, 31, 93 }
4. {1, 2, 7, 14, 49, 98 }
5. {1, 2, 4, 23, 46, 92 }
6. {1, 3, 9, 11, 33, 99 }
7. {1, 2, 3, 6, 17, 34, 51, 102 }
8. {1, 2, 4, 8, 11, 22, 44, 88 }
9. {1, 2, 4, 5, 10, 20, 25, 50, 100 }
10. { 41, 43, 47, 53, 59 }
11. $0.3 = \frac{3}{10}$
12. $\frac{25}{100} = \frac{1}{4}$
13. $5.5 = 5\frac{5}{10} \xrightarrow{reduce} 5\frac{1}{2} = 5\ 1/2$
14. $1.25 = 1\frac{25}{100} \xrightarrow{reduce} 1\frac{5}{20} \xrightarrow{reduce} 1\frac{1}{4} = 1\ 1/4$
15. $\frac{35}{100} = \frac{7}{20} = 7/20$
16. $0.2 = \frac{1}{5} = 1/5$
17. $0.7 = \frac{7}{10} = 7/10$
18. $0.4 = \frac{2}{5} = 2/5$
19. $0.9 = \frac{9}{10} = 9/10$
20. $3.75 = 3\frac{3}{4} = 3\ 3/4$
21. 30
22. 18
23. 8
24. 40
25. 5
26. 9
27. 6
28. 3
29. 12
30. 50
31. 0.0024
32. 0.0021
33. 0.015
34. 0.0012
35. 0.021
36. 0.15
37. 0.0015
38. 0.021
39. 0.018
40. 0.0018
41. 64
42. 256
43. 125
44. 625
45. 100
46. 1000
47. 10000
48. 400
49. 8000
50. 160000
51. $\begin{array}{r} \frac{9}{12} \\ +\ \frac{2}{12} \\ \hline \end{array} = \frac{11}{12}$
52. $\begin{array}{r} 5\frac{4}{24} \\ +\ \frac{3}{24} \\ \hline \end{array} = 5\frac{7}{24}$
53. $\begin{array}{r} 1\ \ \frac{9}{24} \\ -\ \frac{16}{24} \\ \hline \end{array} = \frac{17}{24}$
54. $\begin{array}{r} 4\frac{15}{20} \\ -\ 1\frac{6}{20} \\ \hline \end{array} = 3\frac{9}{20}$
55. $\begin{array}{r} \frac{9}{12} \\ +\ \frac{10}{12} \\ \hline \end{array} = \frac{19}{12} = 1\frac{7}{12}$
56. $\begin{array}{r} \frac{26}{42} \\ -\ \frac{9}{42} \\ \hline \end{array} = \frac{17}{42}$
57. $\begin{array}{r} \frac{38}{70} \\ +\ \frac{49}{70} \\ \hline \end{array} = 1\frac{17}{70}$
58. $\begin{array}{r} 3\frac{9}{24} \\ -\ \frac{4}{24} \\ \hline \end{array} = 3\frac{5}{24}$
59. $\begin{array}{r} 1\frac{3}{24} \\ -\ \frac{20}{24} \\ \hline \end{array} = \frac{7}{24}$
60. $\begin{array}{r} 2\frac{35}{80} \\ -\ \frac{4}{80} \\ \hline \end{array} = 2\frac{31}{80}$
61. 2/5

62. 3/14
63. 4/27
64. 5/42
65. 6/17
66. 7/58
67. 8/33
68. 9/64
69. 9/17
70. 7/6
71. 16+ (12-8)×(7- 3) = 32
72. 30×(1 -2/3) = 10
73. 90×(1 -5/9) = 40
74. 12×(2+3/4) = 33
75. 52/(9-5)×5 = 65
76. 5280×(1 -1/4) = 3960
77. $\frac{1}{4} \times 16 \times 6 = 24$ ounces
78. (a) 10π (b) 25π
79. (a) (7+3)/2 = 5
    (b) 6×(7+3)/2 = 30
80. 3×6/(3/4) = 24
81. $2\times(16^2)/16 = 32$
82. $2\times(12^2)/24 = 12$
83. $2\times(24^2)/36 = 32$
84. $2\times(18^2)/54 = 12$
85. (a) $(-3)^2 = 9$
    (b) $30^2 = 900$
    (c) $0.3^2 = 0.09$
86. Black: 9.5×2 = 19
    Gray: 11 ×1 = 11
    19 + 11 = 30
87. 5×2×10 = 100
    5×10÷2×3 = 75
    100 + 75 = <u>175</u>
88. Five different sizes
    1×1, 2×2, 3×3, 4×4, 5×5
89. 27 of them

1×1	13
2×2	4
3×3	5
4×4	4
5×5	1
Total	**27**

90. 2, 3, and 6
91. 111…112
92. E
    111…112 is divisible by 2, 4, 6, and 8.
93. Reduce the overlap by 1, then the total length will increase by 1.
    56 – 50 = 6
    10 – 6 = 4 cm
94. 3 + 2 + 2 = <u>7</u>
95. <u>5</u>
    Let x be the number to start with.
    $x + 1$ and $2x + 7$
    Apply <u>Euclidean algorithm</u>.

$x + 1$	$2x + 7$	2
	$2x + 2$	
	5	