

Answer Key

1. The GCF of (40, 100) is 20.
2. The GCF of (60, 150) is 30.
3. The GCF of (49, 91) is 7.
4. The GCF of (123, 234) is 3.
5. The GCF of (720, 450) is 90.
6. 4
7. 5
8. 2
9. 6
10. 3
11. 13
12. 7
13. 39
14. $150 = 1 \times 150 = 2 \times 75 = 3 \times 50 = 5 \times 30 = 6 \times 25 = 10 \times 15$. Thus, the factors are {1, 2, 3, 5, 6, 10, 15, 25, 30, 50, 75, 150}.
15. $180 = 1 \times 180 = 2 \times 90 = 3 \times 60 = 4 \times 45 = 5 \times 36 = 6 \times 30 = 9 \times 20 = 10 \times 18 = 12 \times 15$. Thus, the factors are {1, 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 30, 36, 45, 60, 90, 180}.
16. $162 = 1 \times 162 = 2 \times 81 = 3 \times 54 = 6 \times 27 = 9 \times 18$. Thus, the factors are {1, 2, 3, 6, 9, 18, 27, 54, 81, 162}.
17. $15 = 1 \times 15 = 3 \times 5$. Thus, the factors are {1, 3, 5, 15}.
18. It is a prime since $17 = 1 \times 17$. Thus, the factors are {1, 17}.
19. $52.2 - 11.4 = 40.8$
20. $109 - 20 = 89$
21. $64.2 - 16.2 = 48$
22. $9.8 - 0.4 = 9.4$
23. $47.4 - 12.6 = 34.8$
24. $82 - 26 = 56$
25. $61.8 - 15.6 = 46.2$
26. $106.8 - 55.8 = 51$
27. $6 - 3.6 = 2.4$
28. $13.7 - 3.7 = 10$
29. $\square = 5$
30. $\square = 18.3$
31. $\square = 49.2$
32. $\square = 12$
33. $\square = 33.6$
34. $\square = 0.42$
35. $\square = 59$
36. $\square = 12.8$
37. $\square = 60$
38. $\square = 13.8$
39. $45 \div 9 = 5$
40. $50 \div 7 = 7 \text{ R } 1$
41. $240 \div 4 = 60$
42. $360 \div 4 = 90$
43. 17
44. $\square = 8$
45. $\square = 3$
46. $\square = 8$
47. $\square = 17$
48. $\square = 11$
49. $\square = 10$
50. $\square = 5$
51. $\square = 17$
52. $\square = 29$
53. $\square = 39$
54. $\square = 46.2$
55. $\square = 0.62$
56. $\square = 51$
57. $\square = 80$
58. $\square = 1.74$
59. $\frac{6}{24} = \frac{1}{4} = 0.25 = 25\%$
60. (a) 25% (b) 75%
61. (a) 75% (b) 25%
62. $50 \times 5\% = \$2.50$
63. $1 - 24\% - 13\% - 41\% = \underline{22\%}$
64. $\frac{3}{8} = 37.5\%$
65. $0.55 \times 40 = 22$
66. $620 \times 0.55 = \$340$
67. $75 \times \frac{1}{5} = 15$
68. $19 \times 2 - 16 = 22$
69. $120 \times 60\% = 120 \times 0.6 = 12 \times 6 = 72 \text{ lb}$
70. $102 - 85 = 17$
 $\frac{17}{85} = \frac{1}{5} = 0.2 = 20\%$
71. $20\% \times 50 = 0.2 \times 50 = 10$
72. $\frac{16}{25} = \underline{64\% \text{ (B)}}$
 $\frac{9}{25} = \underline{36\% \text{ (G)}}$
73. 80%
74. $\frac{2}{3} = 0.6\overline{6} = 66\frac{2}{3}\%$
75. $240 - 192 = 48$
 $\frac{48}{192} = \frac{1}{4} = \underline{25\%}$
76. $\frac{45-40}{40} = \frac{1}{8} = 12.5\%$
77. $12.5\% = \frac{1}{8}$
 $192 \times 1\frac{1}{8} = 192 + 24 = \underline{\$216}$
78. $12 \times 3 \times 1.05 = 36 \times 1.05 = \37.80
79. $1 - (\frac{1}{8} + \frac{1}{4} + \frac{1}{5}) = \frac{17}{40}$
No, less than $\frac{1}{2}$
80. $8 \div \frac{2}{3} = 12$ blouses
81. $12 \times 2\frac{1}{4} = 24 + 3 = 27$ hours
82. $35 \times (1 - \frac{2}{7}) = 35 \times \frac{5}{7} = \25
83. $30 \times (1 - \frac{1}{6}) = \25
84. $12 \times 4.75 = 3 \times 19 = \57
85. $8 \times (4.7 - 3.75) = 8 \times 0.95 = \underline{7.6 \text{ tons}}$
86. 63 lb 8 oz - 36 lb 9 oz
 $= \underline{26 \text{ lb } 15 \text{ oz}}$
87. $11.25 \div 0.25 = 11.25 \times 4 = 45$ lots
88. $\frac{171000}{3800} = \frac{1710}{38} = \frac{855}{19} = \underline{45}$
89. $\frac{21}{1.5} = \frac{42}{3} = 14$ (cups)
90. $75 \times \frac{4}{5} = 60$ pounds
91. $1\frac{1}{2} + 2\frac{3}{4} = 4\frac{1}{4} = 4$ hours 15 min
92. $80 \times \frac{1}{20} = \4
 $80 + 4 = \$84$
93. $1 - \frac{2}{3} = \frac{1}{3}$ (occupied)
 $\frac{1}{3} \times 2460 = 820$ cars
94. $45 \times \frac{1}{3} = \15
95. $6 \times 2 = 12$
96. $63.75 \times \frac{2}{5} = \25.50
97. 1
98. $\frac{7}{8}$

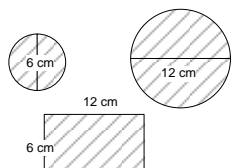
Answer Key

1. 0.02
2. 5
3. 0.3
4. 2
5. 0.000002
6. 0.0003
7. 100
8. 6000000
9. 0.075
10. 0.000075
11. 500
12. 0.002
13. 500000
14. 2
15. 3000
16. 3
17. 1.5
18. 0.00016
19. 2
20. 2.4
21. $30=1\times 30=2\times 15=3\times 10=5\times 6=6\times 5$. Thus, the factors are {1, 2, 3, 5, 6, 10, 15, 30}.
22. $39=1\times 39=3\times 13$. Thus, the factors are {1, 3, 13, 39}.
23. $48=1\times 48=2\times 24=3\times 16=4\times 12=6\times 8$. Thus, the factors are {1, 2, 3, 4, 6, 8, 12, 16, 24, 48}.
24. It is a prime since $29=1\times 29$. Thus, the factors are {1, 29}.
25. $32=1\times 32=2\times 16=4\times 8$. Thus, the factors are {1, 2, 4, 8, 16, 32}.
26. $56=1\times 56=2\times 28=4\times 14=7\times 8=8\times 7$. Thus, the factors are {1, 2, 4, 7, 8, 14, 28, 56}.
27. $64=1\times 64=2\times 32=4\times 16=8\times 8$. Thus, the factors are {1, 2, 4, 8, 16, 32, 64}.
28. $60=1\times 60=2\times 30=3\times 20=4\times 15=5\times 12=6\times 10$. Thus, the factors are {1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60}.
29. $81=1\times 81=3\times 27=9\times 9$. Thus, the factors are {1, 3, 9, 27, 81}.
30. It is a prime since $83=1\times 83$. Thus, the factors are {1, 83}.
31. $92=1\times 92=2\times 46=4\times 23$. Thus, the factors are {1, 2, 4, 23, 46, 92}.
32. 33
33. 1
34. 24 R 3
35. 6 R 1
36. 13 R 0
37. 0
38. 999
39. 1000
40. True
41. $67.8 - 40.2 = 27.6$
42. $50 \div 5 = 10$
43. $180 \div 5 = 36$
44. $207 \div 3 = 69$
45. $72 \div 4 = 18$
46. $\square = 2$
47. $\square = 7$
48. $\square = 9$
49. $\square = 4$
50. $\square = 9$
51. $\square = 19$
52. $\square = 14$
53. $\square = 38$
54. $\square = 31$
55. $\square = 10$
56. $\square = 0.2$
57. $\square = 13.8$
58. $\square = 0.58$
59. $\square = 150$
60. $\square = 2.7$
61. $\frac{2}{6} = \frac{1}{3}$
62. Dan, Chris, Jim, Tim, Robert.
63. $\frac{1}{4}$
64. $75\% \times 52 = 39$
65. $3 \times 5 = 15$
66. $3 \times 4 = 12$
67. There are 4 possible outcomes: (H, H), (H, T), (T, H) and (T, T).
68. (H, H), (H, T), and (T, H).
69. $5 \times 4 = 20$
70. $3 \times 2 = 6$ ways to scramble the work "map" as map, mpa, amp, apm, pam, pma.
71. $5 \times 4 = 20$
72. $\frac{1}{2}$
73. $\frac{1}{3}$
74. $\frac{72 \times 2 \times 4}{3 \times 1 \times 4} = \frac{9 \times 2 \times 4}{6} = \frac{9 \times 1 \times 4}{3} = \frac{48}{1} = 12$ cans
75. There are 3 possible outcomes: 2H, 1H1T and 2T. Note that HT = TH.
76. 2H and 1H1T
77. 2T
78. $1.25 \times 24 = 1\frac{1}{4} \times 24 = 24 + 6 = 30$
79. $7 \times 3 = 21$ (with change)
 $7 \times 4 = 28$ (not enough)
He can only buy 3 books at most.
80. 3 red and 9 white
Note: to get $\frac{1}{4}$ of red, the ratio of red to white is 1:3.
 $1:3 = 2:6 = 3:9$, thus there are at 3 red goldfish and 9 white goldfish that can be put into the tank.
81. $\frac{1}{2}(4 \times 8) \times 2 = 32$ in²
82. $2 \times 100 \times 3.14 = 628$ in
83. $36 \div 2 = 18$ (half-perimeter)
 $18 - 10 = 8$ in (width)
 $8 \times 10 = 80$ sq. in.

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84. $14^2 = 196$
 $14 + 2 = 16$
 $14 - 2 = 12$
 $12 \times 16 = 192 \text{ sq. in.}$

85. Clues are provided in the figure below:



$P = 18\pi$
 $A = 45\pi + 72$

86. $40 \times 3.14 = \underline{125.6 \text{ ft}}$

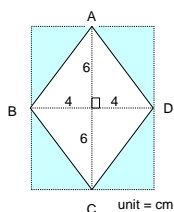
87. 9758

88. 4321

89. $8 \times 2 = 16$ (half-perimeter)
 $16 - 10 = 6$ (width)
 $10 \times 6 = 60$ (area)
Square ($8^2 = 64$) is larger by 4 sq. ft.

90. $20 \div 2 = 10$
 $4 \times 10 = 20$
 $20 - 4$ (corners) = 16 pcs

91. $4(\frac{1}{2} \times 6 \times 4) = 48$
 or
 $\frac{1}{2}(12 \times 8) = \underline{48}$



92. top = 2, base = 5, height = 8
 $\text{Area} = \frac{1}{2}(2+5)(8) = \underline{28}$

93. $19\frac{1}{2} + 18.7 = 19.5 + 18.7 = 38.2$ tons

94. $60 \div 12 = 5$
 $2(12 + 5) = 34$
 $34 - 4 = 30$ tiles

95. $P = 10\pi$
 $A = 5\pi$

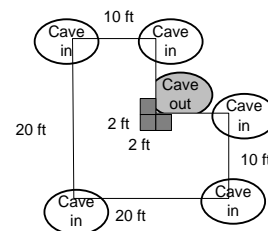
96. $P = 10\pi$
 $A = 5\pi$

97. $\frac{1}{2}(3 \times 3) = 4.5 \text{ in}^2$

98. $8 \times 8 = 64$
 $64 \div 16 = 4$

$2 \times (16 + 4) = 40$
Rectangle has longer perimeter by $40 - 32 = \underline{8 \text{ ft}}$

99. $20 \div 2 = 10$
 $4 \times 10 = 20$
 5 cave-in corners - 1 cave-out corner = 4
 $20 - 4$ (corners) = 16 pcs



100. (a) $\frac{1}{2} \times 20 \times 15 = 150 \text{ cm}^2$
 (b) $150 = \frac{1}{2} \times 25 \times AH$
 $AH = 300 \div 25 = 12 \text{ cm}$

Answer Key

Synonym Replacement

1. C
2. B
3. B
4. A
5. B
6. C
7. C
8. B
9. B
10. B
11. B
12. A
13. C
14. B
15. B

Analogies

16. C
17. D
18. A
19. C
20. A
21. C
22. D
23. D
24. C
25. D
26. C
27. D
28. D
29. C
30. D
31. D
32. D
33. C
34. D
35. D

Sentence Completion

36. A
37. C
38. C

39. A
40. D
41. A
42. C
43. A
44. D
45. B
46. D
47. A
48. D
49. A
50. B
51. A
52. A
53. C
54. A
55. B

Confusing Words

56. forebear
57. palette
58. infer
59. stationery
60. through
61. principles
62. Clothes
63. It's
64. Write
65. due
66. draw
67. among
68. envelope
69. Heard
70. curb
71. balmy
72. advise
73. isle
74. Here
75. climactic
76. (C) akin
77. (A) addicted

78. (B) adventurous
79. (E) antecedent
80. (D) antecedent
81. (B) adventurous
82. (A) addicted
83. (C) akin
84. (D) antecedent
85. (E) antecedents
86. (C) bristle
87. (D) clarion
88. (B) biased
89. (A) attribute
90. (E) conquer
91. (B) biased
92. (E) conquered
93. (C) bristled
94. (A) attribute
95. (D) clarion
96. (E) gaze
97. (A) decorous
98. (B) dispatch
99. (D) filthy
100. (C) emotion
101. (D) filthy
102. (C) emotions
103. (B) dispatch
104. (E) gazed
105. (A) decorous
106. (C) kin
107. (A) hew
108. (B) incidence
109. (E) mourn
110. (D) manner
111. (B) incidences
112. (A) hew
113. (E) mourned
114. (C) kin
115. (D) manner
116. (D) recognize
117. (B) parry
118. (A) omission

119. (E) roam
120. (C) pose
121. (B) parried
122. (D) recognized
123. (C) posed
124. (A) omission
125. (E) roam
126. (B) subterranean
127. (D) unrest
128. (C) threshold
129. (E) yearling
130. (A) sloe
131. (D) unrest
132. (A) sloe
133. (B) subterranean
134. (E) yearling
135. (C) threshold
136. (J) conquer
137. (B) adventurous
138. (A) addicted
139. (D) antecedent
140. (C) akin
141. (E) antecedent
142. (F) attribute
143. (G) biased
144. (H) bristle
145. (I) clarion
146. (E) gaze
147. (F) hew
148. (D) filthy
149. (G) incidence
150. (C) emotion
151. (A) decorous
152. (H) kin
153. (I) manner
154. (J) mourn
155. (B) dispatch
156. (G) subterranean
157. (E) roam
158. (F) sloe
159. (A) omission
160. (H) threshold
161. (D) recognize
162. (C) pose
163. (I) unrest
164. (B) parry
165. (J) yearling

166.

Answer Key

Analogies

1. A
2. A
3. C
4. A
5. B
6. B
7. A
8. D
9. A
10. D
11. B
12. A
13. A
14. C
15. D
16. D
17. C
18. C
19. B
20. A

Sentence Completion

21. C
22. C
23. B
24. D
25. A
26. D
27. B
28. A
29. A
30. C
31. A
32. B
33. A
34. D
35. C
36. C
37. B
38. B

39. C

40. B

Synonym Replacement

41. B

42. A

43. C

44. D

45. B

46. B

47. D

48. B

49. B

50. B

51. C

52. D

53. C

54. B

55. B

56. C

57. B

58. D

59. A

60. C

Confusing Words

61. loathe

62. Lose

63. bear

64. principle

65. principal

66. oral

67. complement

68. here

69. torturous

70. hole

71. Breath

72. desert

73. breath

74. There

75. duel

76. brooch

77. mitigate

78. chose

79. kerb

80. peace

Hot Vocab

81. (A) absorption

82. (D) aural

83. (C) approximate

84. (E) botch

85. (B) amalgam

86. (C) approximates

87. (B) amalgam

88. (D) aural

89. (E) botched

90. (A) absorption

91. (E) demonstrator

92. (B) conceive

93. (C) contagious

94. (A) cleave

95. (D) debility

96. (B) conceived

97. (C) contagious

98. (A) cleaved

99. (E) demonstrator

100. (D) debility

101. (C) enamor

102. (B) dregs

103. (A) discerning

104. (E) extrinsic

105. (D) exaggerate

106. (E) extrinsic

107. (C) enamored

108. (A) discerning

109. (B) dregs

110. (D) exaggerated

111. (C) gratification

112. (D) homage

113. (E) imperceptible

114. (A) fledgling

115. (B) fumble

- | | |
|------------------------|----------------------|
| 116. (C) gratification | 163. (B) intellect |
| 117. (E) imperceptible | 164. (D) Martian |
| 118. (D) homage | 165. (C) laxity |
| 119. (A) fledgling | 166. (E) missile |
| 120. (B) fumbled | 167. (F) nocturnal |
| 121. (A) incorporate | 168. (H) paternal |
| 122. (E) missile | 169. (I) plausible |
| 123. (C) laxity | 170. (A) incorporate |
| 124. (B) intellect | |
| 125. (D) Martian | |
| 126. (A) incorporate | |
| 127. (B) intellect | |
| 128. (E) missile | |
| 129. (D) Martians | |
| 130. (C) laxity | |
| 131. (E) prenatal | |
| 132. (D) plausible | |
| 133. (A) nocturnal | |
| 134. (B) ostentation | |
| 135. (C) paternal | |
| 136. (A) nocturnal | |
| 137. (C) paternal | |
| 138. (B) ostentation | |
| 139. (D) plausible | |
| 140. (E) Prenatal | |
| 141. (B) amalgam | |
| 142. (C) approximate | |
| 143. (D) aural | |
| 144. (E) botch | |
| 145. (F) cleave | |
| 146. (A) absorption | |
| 147. (I) debility | |
| 148. (J) demonstrator | |
| 149. (G) conceive | |
| 150. (H) contagious | |
| 151. (A) discerning | |
| 152. (G) fumble | |
| 153. (I) homage | |
| 154. (H) gratification | |
| 155. (J) imperceptible | |
| 156. (B) dregs | |
| 157. (D) exaggerate | |
| 158. (C) enamor | |
| 159. (E) extrinsic | |
| 160. (F) fledgling | |
| 161. (G) ostentation | |
| 162. (J) prenatal | |