

# Answer Key

- |   |  |
|---|--|
| 1. C  | 35. 10   |
| 2. B  | 36. 12   |
| The two parts of the first figure are rearranged and joined along the longer sides. The common side is then lost to form the second figure. | 37. 13   |
| 3. A  | 38. 14   |
| 4. D  | 39. 21   |
| 5. B  | 40. 22   |
| 6. C  | 41. B  |
| 1, 2, 3   | A palm tree is to a pine tree as a bathing suit is to a parka. This relationship shows an opposite—warm to cold. Palm trees grow in warm climates and pine trees grow in cold climates. Bathing suits are worn in warm weather; parkas are worn in cold weather. |
| 2, 4, 6   |  |
| 3, 6, <input type="checkbox"/> 9  |  |
| 7. A  | 42. C  |
| 8. A  | A trapeze performer is to a clown as swings are to a sliding board. This relationship shows a classification. Trapeze performers and clowns are found at circuses; swings and sliding boards are found on playgrounds.   |
| 9. C  | 43. C  |
| The third figure in each row comprises of parts which are not common to the first two figures.  | House is to tent as truck is to wagon. The house is a more sophisticated form of shelter than the tent; the truck is a more sophisticated mode of transportation than the wagon.   |
| 10. B   | 44. A  |
| 11. 26  | A snow-capped mountain is to a crocodile as a cactus is to a starfish. This relationship shows an opposition. The crocodile does NOT belong on the mountain; the starfish does NOT belong in the desert.   |
| 12. 36  | 45. D  |
| 13. 52  | Hose is to firefighter as needle is to nurse. This relationship shows the tools of the trade. A hose is a tool used by a firefighter; a needle is a tool used by a nurse.  |
| 14. 65  | 46. B  |
| 15. 24  | Dishes are to kitchen sink as car is to hose. Dishes are cleaned in the sink; the car is cleaned with the hose.  |
| 16. 44  | 47. A  |
| 17. 88  | Knitting needles are to sweater as a computer is to a report. This relationship shows the tool needed to make a product. The knitting needles are used to create the sweater; the computer is used to write a report.  |
| 18. 66  | 48. B  |
| 19. 60  | Bread is to knife as log is to ax. This relationship shows function. The knife cuts the bread; the ax chops the log.   |
| 20. 96  |  |
| 21. 99  |  |
| 22. 84  |  |
| 23. 39  |  |
| 24. 72  |  |
| 25. 33  |  |
| 26. 48  |  |
| 27. 22  |  |
| 28. 108   |  |
| 29. 55  |  |
| 30. 77  |  |
| 31. 6   |  |
| 32. 7   |  |
| 33. 8   |  |
| 34. 9   |  |

## GT3 (Fall, 2019) Issue 1

49. A	82. 28
Cup is to bowl as vacuum cleaner is to broom.	83. 112
This is another relationship about function. The	84. 98
cup and bowl are both used for eating. The	85. 60
vacuum cleaner and broom are both used for	86. 105
cleaning.	
50. D	87. 126
A bookshelf is to a book as a refrigerator is to a	88. 91
carton of milk. The book is placed on a bookshelf;	89. 135
the milk is placed in a refrigerator.	90. 104
51. 3	91. 25
52. 26	92. 28
53. 1	93. 29
54. 28	94. 30
55. 14	95. 31
56. 26	96. 32
57. 11	97. 33
58. 5	98. 35
59. 31	99. 37
60. 34	100. 38
61. 27	101. 8
62. 17	102. 3
63. 16	103. 10
64. 16	104. 11
65. 9	105. 6
66. 29	106. 30
67. 15	107. 11
68. 11	108. 23
69. 19	109. 13
70. 32	110. 6
71. 78	111. 5
72. 30	112. 21
73. 84	113. 21
74. 45	114. 9
75. 70	115. 9
76. 56	116. 1
77. 117	117. 20
78. 90	118. 32
79. 120	119. 7
80. 42	120. 10
81. 75	

# Answer Key

- |                          |       |
|--------------------------|-------|
| 1. D                     | 29. B |
| Feral and tame are       | 30. C |
| antonyms; ephemeral      | 31. D |
| and immortal are         | 32. D |
| antonyms.                | 33. B |
| rancid: stale            | 34. A |
| nettlesome: irritating.  | 35. A |
| 2. D                     | 36. B |
| To be phobic is to be    | 37. B |
| extremely fearful; to be | 38. C |
| asinine is to be         | 39. A |
| extremely silly.         | 40. B |
| finicky: picky           | 41. A |
| 3. D                     | 42. C |
| A binding surrounds a    | 43. C |
| book; a frame            | 44. D |
| surrounds a picture.     | 45. C |
| 4. D                     | 46. B |
| 5. C                     | 47. D |
| 6. C                     | 48. A |
| 7. B                     | 49. D |
| 8. D                     | 50. B |
| 9. A                     | 51. C |
| 10. B                    | 52. D |
| 11. C                    | 53. C |
| 12. D                    | 54. A |
| 13. C                    | 55. C |
| 14. B                    | 56. D |
| 15. D                    | 57. B |
| 16. D                    | 58. A |
| 17. B                    | 59. D |
| 18. C                    | 60. C |
| 19. B                    | 61. A |
| 20. D                    | 62. B |
| 21. C                    | 63. C |
| 22. D                    | 64. B |
| 23. D                    |       |
| 24. A                    |       |
| 25. B                    |       |
| 26. A                    |       |
| 27. B                    |       |
| 28. A                    |       |

# Answer Key

1. A	26. 48
2. B	27. 64
In each row, the figures are getting laterally inverted in each step. The number of components or the quantities are either increasing or decreasing from left to right sequentially.	28. 51
	29. 153
	30. 54
3. B	31. 39
here are 3 types of faces, 3 types of bodies, 3 types of hands and 3 types of legs, each of which is used only once in a single row. So, the features which have not been used in the first two figures of the third row would combine to produce the missing figure.	32. 41
	33. 42
	34. 43
	35. 44
	36. 46
4. A	37. 49
5. C	38. 7
In each row, the number of elements in the third figure is equal to the difference in the number of elements in the first and second figures. Also, the third figure has the same types of elements (if any) as the elements in the first figure.	39. 10
	40. 11
	41. 5
	42. 11
6. A	43. 11
The number of components in each row either increases or decreases from left to right. In the third row, it increases.	44. 29
	45. 11
7. B	46. 5
8. C	47. 19
9. D	48. 9
10. C	49. 10
In each row, the triangle follows the circle, the square follows the triangle and the circle follows the square. In case of the third row, the above rule exists for the inner as well as the outer elements.	50. 12
	51. 17
	52. 30
	53. 13
11. 90	54. 33
12. 36	55. 18
13. 34	56. 23
14. 68	57. 23
15. 85	58. 15
16. 72	59. 12
17. 102	60. 3
18. 96	61. A
19. 32	62. B
20. 136	63. C
21. 119	64. A
22. 144	65. D
23. 112	66. D
24. 80	67. C
25. 128	

## GT3 (Fall, 2019) Issue 2

68. A

69. **Answer: A**

**Explanation:**

**In the first series, the closed figure loses sides one by one and the open figure gains sides one by one as the series proceeds.**

70. **Answer: C**

**Explanation:**

In the third series, the image becomes simpler as the series proceeds.

71. 14

72.  $3 \times 24 = 72$

73.  $1+2+3+4+5+10+9+8+7+6 = 5 \times 11 = 55$

74.  $3 \times 3 \times 3 = 27$

75.  $\angle 1 = 50^\circ$   
 $\angle 2 = 40^\circ$

76.  $3 \times 2 \times 12 = 72$  (cups)  
 $72 \div 4 = 18$  qt

77.  $72 \div 6 = 12$

78.  $3 \times 3 \times 2 = 18$  spiders

79. 12 black blocks

80. 10 white blocks

81.  $2 \times 50 = 100$   
 $100 \div 20 = 5$   
 $5 \times 5 = 25$  gal

82.  $4 \times 4 \times 4 = 64$   
 $5 \times 5 + 2 \times 3 \times 3 + 3 = 25 + 18 + 3 = 46$   
 $64 - 46 = 18$

83.  $1:30 + 0:45 + 0:20 = 2:35$   
 $3:15 + 2:35 = 5:50$   
 $6:30 - 5:50 = 0:40 = 40$  min

84. C

85.  $65, 82$   
 $5^2 + 1 = 25$   
 $6^2 + 1 = 37$   
 $7^2 + 1 = 50$   
 $8^2 + 1 = 65$   
 $9^2 + 1 = 82$

86.  $6 \times 4 \times 2 = 48$   
 $\frac{1}{2} \times 3 \times 3 \times 4 = 18$   
 $48 + 18 = 66$

87.  $4 \times 4 \times 4 = 64$  (total)  
 $2 \times 2 \times 2 = 8$  (unpainted)  
 $64 - 8 = 56$

88.  $2 \times 18 = 36$  times

The following will appear every 12 hours.

4	1:1	1:11	11:1	11:11
4	2:2	2:22	22:2	22:22
2	3:3	3:33		
2	4:4	4:44		
2	5:5	5:55		
1	6:6			
1	7:7			
1	8:8			
+1	9:9			
18				

89.  $60 \times 85 = 5100$

90.  $\frac{6}{10} = \frac{3}{5}$

91. C

92.  $3 + 1 = 4$

$1200 \div 4 = 300$

$300 \times 3 = 900$

93.  $192 \div 24 = 8$

$2(8 + 24) = 64$

94.  $1.11 - 1.0011 = 0.1089$

95. 6 different possible numbers:  
357, 375, 537, 573, 735, 753

96. D

See the following relations.

$C > M$

$K > B | T$

$C > M > K > B | T$

97.  $9.36 \div 4 = \$2.34$

98.  $35 \times 2 = 70$   
 $70 \times 2 = 140$ ¢ = \$1.40

99. 82 R 4

100. C  
 $1:35 + 1:15 + 0:45 = 3:35$

101.  $35 + 46 = 81$

102.  $20 - 2 = 18$   
 $18 \div 3 = 6.00$

103. 2 ways as below:  
 $4 + 16 = 20$   
 $5 + 15 = 20$

104.  $48 \times 25 = 12 \times 4 \times 25 = 12 \times 100$

105.  $3 \times 3 = 9$  (Lucy's share alone)  
 $9 \times 4 = 36$

106. C

107. A

There are five different arrangements shown as

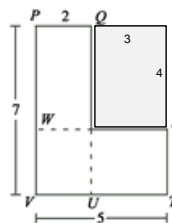
below.

	5 cm	2 cm
1	9 rods	3 rods
2	7 rods	8 rods
3	5 rods	13 rods
4	3 rods	18 rods
5	1 rods	23 rods

108.  $27 \times 2 \div 6 = 9$  cm

109. Method I)

$5 \times 7 - 3 \times 4 = \underline{23}$



Method II)

$2 \times 7 = 14$

$3 \times 5 = 15$

$2 \times 3 = 6$  (overlapping)

$14 + 15 - 6 = \underline{23}$

110.  $3 + 2 = 5$

They need 2 canoes.

$2 \times 7.5 \times 3 = \boxed{\$45}$

# Answer Key

- |   |   |   |
|---|---|---|
| <p>1. A</p> <p>2. B<br/>Coffee goes into a cup and soup goes into a bowl. Choices a and c are incorrect because they are other utensils. The answer is not choice d because the word food is too general.</p> <p>3. B<br/>Elated is the opposite of despondent; enlightened is the opposite of ignorant.</p> <p>4. D<br/>Candid and indirect refer to opposing traits. Honest and untruthful refer to opposing traits. The answer is not choice a because frank means the same thing as candid. Wicked (choice b) is incorrect because even though it refers to a negative trait, it does not mean the opposite of honest. Choice c is incorrect because truthful and honest mean the same thing.</p> <p>5. D<br/>Siamese is a kind of cat; romaine is a kind of lettuce.</p> <p>6. C<br/>A skein is a quantity of yarn; a ream is a quantity of paper.</p> | <p>7. C<br/>Obsession is a greater degree of interest; fantasy is a greater degree of dream.</p> <p>8. B<br/>To tailor a suit is to alter it; to edit a manuscript is to alter it.</p> <p>9. A</p> <p>10. D</p> <p>11. B</p> <p>12. B</p> <p>13. A</p> <p>14. C</p> <p>15. C</p> <p>16. A</p> <p>17. D<br/>A window is made up of panes, and a book is made up of pages. The answer is not choice a because a novel is a type of book. The answer is not choice b because glass has no relationship to a book. Choice c is incorrect because a cover is only one part of a book; a book is not made up of covers.</p> <p>18. A<br/>Guide and direct are synonyms, and reduce and decrease are synonyms. The answer is not choice b or d because neither means the same as reduce. Choice c is incorrect</p> | <p>because increase is the opposite of reduce.</p> <p>19. B<br/>A petal is a part of a flower; a tire is a part of a bicycle.</p> <p>20. D<br/>Devotion is characteristic of a monk; wanderlust is characteristic of a rover.</p> <p>21. C</p> <p>22. A</p> <p>23. C</p> <p>24. A</p> <p>25. B</p> <p>26. D</p> <p>27. C</p> <p>28. B</p> <p>29. A</p> <p>30. C</p> <p>31. D</p> <p>32. B</p> <p>33. A</p> <p>34. A</p> <p>35. C</p> <p>36. B</p> <p>37. B</p> <p>38. C</p> <p>39. C</p> <p>40. D</p> <p>41. C</p> <p>42. B</p> <p>43. A</p> <p>44. C</p> <p>45. D</p> <p>46. B</p> <p>47. A</p> <p>48. A</p> <p>49. B</p> <p>50. B</p> |
|---|---|---|

- 51. D
- 52. A
- 53. D
- 54. D
- 55. B
- 56. A
- 57. D
- 58. D
- 59. C
- 60. A
- 61. D
- 62. C
- 63. B
- 64. D
- 65. C
- 66. A
- 67. C
- 68. A
- 69. B
- 70. D
- 71. C
- 72. C
- 73. D
- 74. A



# Answer Key

- |  |   |
|--|---|
| 1. B   | 42. 11  |
| 2. A   | 43. 24  |
| In each row, the central part of the first figure rotates either $90^\circ$ CW or $90^\circ$ ACW to form the central part of the second figure and the central part of the first figure rotates through $180^\circ$ to form the central part of the third figure. Also, in each row, there are 3 types of side elements - rectangles, circles and triangles. | 44. 32  |
| 3. D   | 45. 25  |
| 4. D   | 46. 16  |
| 5. D   | 47. 6   |
| 6. D   | 48. 33  |
| In each row, the third figure is a combination of the first and the second figure.   | 49. 8   |
| 7. B   | 50. 3   |
| In each row, the second figure is obtained by shading one of the four parts of the first figure and the third figure is obtained by shading two out of the four parts of the first figure.   | 51. 21  |
| 8. C   | 52. 13  |
| 9. D   | 53. 16  |
| 10. A  | 54. 13  |
| 11. 84   | 55. 23  |
| 12. 176  | 56. 12  |
| 13. 189  | 57. 7   |
| 14. 88   | 58. 16  |
| 15. 66   | 59. 14  |
| 16. 42   | 60. 14  |
| 17. 115  | 61. <b>Answer: C</b>  |
| 18. 110  | <b>Explanation:</b>   |
| 19. 168  | Only the third series follows the given rule.   |
| 20. 132  | 62. <b>Answer: D</b>  |
| 21. 198  | <b>Explanation:</b>   |
| 22. 126  | Only the fourth series follows the given rule.  |
| 23. 147  | 63. <b>C</b>  |
| 24. 63   | 64. <b>A</b>  |
| 25. 69   | 65. <b>B</b>  |
| 26. 44   | 66. <b>C</b>  |
| 27. 154  | 67. <b>B</b>  |
| 28. 92   | <b>In the second series, the image becomes simpler as the series proceeds. The trapezium inside the cloud loses its side one by one as the sequence proceeds one step forward to the right side.</b>  |
| 29. 105  | 68. <b>Answer: A</b>  |
| 30. 46   | <b>Explanation:</b>   |
| 31. 18   | Only in the first series, the image rotates 45 degrees as it moves towards the right side. In the second series, it turns 30 degrees; in third series, it rotates 90 degrees, and in the fourth series, it rotates by 15 degrees as it moves one step forward towards the right side. See the corner of the image, which forms a small square, to understand the movement of the image. |
| 32. 28   | 69. <b>Answer: D</b>  |
| 33. 19   | <b>Explanation:</b>   |
| 34. 30   | Only in the fourth series, an image formed by curved lines alternates with an image formed by straight lines. The images in the first, second and   |
| 35. 31   |   |
| 36. 21   |   |
| 37. 32   |   |
| 38. 33   |   |
| 39. 23   |   |
| 40. 35   |   |
| 41. 6  |   |

### GT3 (Fall, 2019) Issue 3

third series do not follow this rule.

70. **Answer:** A

**Explanation:**

Only in the first series, the sides of the shapes increase by one as we move one step forward towards the right side, e.g., the shapes in the first series have 3, 4, 5 and 6 sides respectively. In the remaining series, the sides of the shapes are not increasing by one as we move towards the right side.

71. 200  
 72. 50  
 73. 138  
 74. 96  
 75. 192  
 76. 125  
 77. 48  
 78. 144  
 79. 150  
 80. 216  
 81. 184  
 82. 175  
 83. 161  
 84. 72  
 85. 225  
 86. 207  
 87. 75  
 88. 168  
 89. 100  
 90. 120  
 91. C  
 92. C  
 93. B  
 94. B  
 95.  $\frac{120}{360} = \frac{1}{3}$   
 $1 - \frac{1}{3} = \frac{2}{3}$   
 96.  $27 - 19 = 8$   
 $31 - 30 = 1$   
 $8 + 1 = 9$   
 97.  $300 \times 15 = 4500$

98. 7  
 99.  $24 - 9 = 15$   
 $15 \div 3 = 5$   
 100. 775  
 101.  $\frac{4 \text{ questions}}{200 + 100 + 50 + 25 = 375}$   
 102.  $25 + 3 \times 100 + 200 = 525$   
 $25 + 2 \times 50 + 2 \times 200 = 525$   
 103.  $2 \times 5 + 3 \times 15 = \$55$   
 104.  $10 + 2 \times 12 + 15 = \$0.49$   
 105.  $0.50 - 0.49 = \$0.01$   
 106.  $32 \div 2 = \$16$   
 107.  $6 \times 4 = 8 \times 3 \text{ hrs}$   
 108.  $2 \times 3 = 2 + 4 = 6$   
 $2 \times 12 = 8 + 16 = 24$   
 109. The hourly hand moves  $30^\circ$  each hour. Within 15 minutes, the hourly hand move  
 $\frac{1}{4} \times 30^\circ = 7.5^\circ$   
 So, the angle is  
 $60 - 7.5 = 52.5$   
 110.  $23 + 32 = 55$   
 $85 - 55 = 30$   
 One more 32¢ will be the least, so a total of  $2 \times 32 + 23 = 87\text{¢}$   
 111.  $1 + 4 = 5$  (or  $4 + 1 = 5$ )  
 112.  $9 - 3 = 6$  (or  $9 - 6 = 3$ )  
 113.  $7 + 10 + 8 = \$25.00$   
 114.  $3 \times 14 = 42 \text{ inches}$   
 115. C  
 By regrouping,  
 $1 + \overbrace{-2 + 3} + \overbrace{-4 + 5} + \overbrace{-6 + 7} + \overbrace{-8 + 9}$   
 $= 1 + 1 + 1 + 1 + 1$   
 $= 5$   
 116.  $36 \div 12 = 3$   
 $3 \times 25 = \$75.00$   
 117.  $4 \times 3 = 12$   
 118. 100  
 119. D  
 120. D

# Answer Key


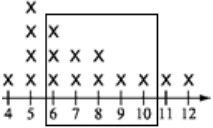
- |                            |                           |                            |
|----------------------------|---------------------------|----------------------------|
| 1. C                       | all parts of a chair. Not | 50. B                      |
| 2. A                       | all chairs have cushions. | 51. B                      |
| 3. B                       | 32. B                     | 52. A                      |
| 4. D                       | 33. D                     | 53. A                      |
| 5. D                       | 34. A                     | If someone has been        |
| 6. D                       | 35. C                     | humiliated, they have      |
| 7. A                       | 36. B                     | been greatly               |
| 8. B                       | 37. C                     | embarrassed. If            |
| 9. C                       | 38. B                     | someone is terrified,      |
| 10. A                      | 39. D                     | they are extremely         |
| 11. C                      | Tire, steering wheel, and | frightened. The answer     |
| 12. C                      | engine are all parts of a | is not choice b because    |
| 13. A                      | car.                      | an agitated person is not  |
| 14. B                      | 40. D                     | necessarily frightened.    |
| 15. A                      | Parsley, basil, and dill  | Choices c and d are        |
| 16. A                      | are types of herbs.       | incorrect because          |
| 17. A                      | Mayonnaise is not an      | neither word expresses     |
| 18. D                      | herb.                     | a state of being           |
| 19. C                      | 41. A                     | frightened.                |
| 20. C                      | A psychologist treats a   | 54. A                      |
| 21. D                      | neurosis; an              | An optimist is a person    |
| 22. D                      | ophthalmologist treats a  | whose outlook is           |
| 23. D                      | cataract.                 | cheerful. A pessimist is   |
| Acute, right, and obtuse   | 42. A                     | a person whose outlook     |
| are geometric terms        | A group of fish is a      | is gloomy. The answer      |
| describing particular      | school; a group of        | is not choice b because    |
| angles. Parallel refers to | wolves is a pack.         | a pessimist does not       |
| two lines that never       | 43. C                     | have to be mean.           |
| intersect.                 | Upon harvesting, cotton   | Choices c and d are        |
| 24. B                      | is gathered into bales;   | incorrect because          |
| 25. B                      | grain is gathered into    | neither adjective          |
| 26. D                      | shocks.                   | describes the outlook of   |
| 27. C                      | 44. C                     | a pessimist.               |
| Heading, body, and         | 45. D                     | 55. C                      |
| closing are all parts of a | 46. A                     | A finch is a type of bird; |
| letter; the letter is the  | 47. D                     | a Dalmatian is a type of   |
| whole, not a part.         | 48. C                     | dog.                       |
| 28. D                      | scrambled words           | 56. B                      |
| 29. D                      | whort: worthless          | One explores to            |
| 30. C                      | nadir: south, opposite    | discover; one researches   |
| 31. C                      | the zenith (north)        | to learn.                  |
| Seat, rung, and leg are    | 49. C                     |                            |

57. B  
A cobbler makes and repairs shoes; a contractor builds and repairs buildings.
58. D  
A dirge is a song used at a funeral; a jingle is a song used in a commercial.
59. B
60. A  
doleful: very much sad
61. C
62. A
63. A
64. B
65. D
66. A
67. D
68. B
69. C
70. B
71. C
72. C
73. D
74. A
75. B
76. A
77. A
78. C
79. C
80. A
81. A
82. B
83. D
84. B
85. C
86. A
87. A
88. B
89. B
90. C
91. A
92. C
93. D
94. B
95. A
96. B
97. C
98. B
99. D
100. C
101. Balanced; matching; equal
102. Adjusting to a different situation; getting used to
103. Constant; continual; not ending
104. Sensitive; susceptible; open to
105. Opposing; acting or pushing against
106. -slowly push beyond what is comfortable, a little at a time
107. Students should note the following:  
-it can decrease risk of injury during sports  
-prevents loss of bone and muscle when you get older
108. -chemicals released into the bloodstream that make you feel happier and reduce pain
109. Students should note the following:  
-exercise the whole body  
-exercise against resistance to get defined muscles  
-use a medicine ball during crunches, increasing the weight over a period of weeks
110. Students should discuss the following:  
-some advice about exercise was considered
- true but never proven by science  
-some advice may contain bits of true information, but also includes information that is not totally true  
-outdated advice is passed down from generation to generation and just accepted as true

# Answer Key

- |  |   |
|--|---|
| 1. B   | 32. 3   |
| 2. C   | 33. 5   |
| In each row, the third figure is a collection of the common elements (line segments) of the first and the second figures.  | 34. 9   |
| 3. C   | 35. 6   |
| There are 3 types of shadings in the triangles, 3 types of legs, 3 positions of circles, each of which is used only once in a single row. The circle is shaded in alternate figures.   | 36. 10  |
| 4. B   | 37. 5   |
| 5. B   | 38. 12  |
| Horizontal flip  | 39. 8   |
| 6. B   | 40. 9   |
| 7. C   | 41. 9   |
| The third figure in each row comprises of the parts common to the first two figures.   | 42. 12  |
| 8. D   | 43. 32  |
| 9. D   | 44. 9   |
| 10. B  | 45. 8   |
| In each row, the second figure is obtained by rotating the first figure through $90^\circ$ CW or $90^\circ$ ACW and adding a circle to it. Also, the third figure is obtained by adding two circles to the first figure (without rotating the figure). | 46. 10  |
| 11. 56   | 47. 17  |
| 12. 130  | 48. 10  |
| 13. 78   | 49. 14  |
| 14. 189  | 50. 10  |
| 15. 216  | 51. 10  |
| 16. 81   | 52. 12  |
| 17. 54   | 53. 13  |
| 18. 140  | 54. 15  |
| 19. 243  | 55. 4   |
| 20. 84   | 56. 15  |
| 21. 234  | 57. 8   |
| 22. 208  | 58. 8   |
| 23. 135  | 59. 22  |
| 24. 104  | 60. 15  |
| 25. 162  | 61. D   |
| 26. 112  | A fish is to a dragonfly as a chicken is to corn. Fish eat insects; chickens eat corn.  |
| 27. 156  | 62. A   |
| 28. 108  | Pyramid is to triangle as cube is to square. This relationship shows dimension. The triangle shows one dimension of the pyramid; the square is one dimension of the cube. |
| 29. 52   | 63. B   |
| 30. 182  | Closet is to shirt as kitchen cabinets are to cans of food. The shirt is stored in the closet; the food is stored in the cabinets.  |
| 31. 4  | 64. B   |
|  | Hat and mittens are to desert as snorkel and flippers are to snow. This relationship shows an opposition. The hat and mittens are NOT worn in                             |

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- the desert; the snorkel and flippers are NOT worn in the snow.
65. B  
Towel is to bathtub as chest of drawers is to bed. The towel and bathtub are both found in a bathroom; the chest and the bed are both found in a bedroom.
66. C  
Fly and termite are insects as snake and lizard are reptile.
67. C  
A shirt is to a button as a belt is to a belt buckle. A button is used to close a shirt; a belt buckle is used to close a belt.
68. B  
A toddler is to an adult as a caterpillar is to a butterfly. This relationship shows the young and the adult. The caterpillar is an early stage of the adult butterfly.
69. D  
Newspaper is to book as trumpet is to banjo. The newspaper and book are to read; the trumpet and banjo are musical instruments to play.
70. A
71. 240
72. 174
73. 224
74. 210
75. 116
76. 60
77. 87
78. 150
79. 90
80. 180
81. 232
82. 120
83. 203
84. 145
85. 168
86. 58
87. 252
88. 196
89. 261
90. 270
91. 100
92.  $18 \times 6 = 108$
93. D  
red      rose  
purple   daisy  
red      dahlia
94.  $12 \times 5 = 60$
95. D
96. A
97. \$1.02
98. \$1.06
99.  $80 - 56 = \boxed{24}$
100. After 7 days
101. 98
102.  $3 \times (3+6) = \underline{27}$
103.  $5 \times 2 = 10$   
 $10 - 1 = \boxed{9}$
104.  $2 \times 2 \times 5 = 20$
105. D
106.  $6 \times 15 = 90$   
 $90 - 76 = 14$   
 $14 \div (6 - 4) = 7$  (smaller tables)  
 $15 - 7 = \boxed{8}$  (larger tables)  
Check:  
 $8 \times 6 + 7 \times 4 = 48 + 28 = 76$
107.  $2 \times (11+19) = \boxed{60 \text{ meters}}$
- 
108. 8
- 
109.  $999 - 101 = \underline{898}$
110. 0.05, 0.25, 0.37, 0.4, 0.81
111. B
112. D
113. D
114.  $\frac{5}{8} \div \frac{1}{4} = 2.5$   
 $2.5 \times 20 = 50 \text{ min}$
115.  $2 \times 12 = 24$   
 $\frac{1}{4} \times 24 \times 25 = 150$   
 $\frac{1}{2} \times 24 \times 10 = 120$   
 $\frac{1}{4} \times 24 \times 5 = 30$   
 $150 + 120 + 30 = 300\text{¢} = \underline{\$3.00}$
116.  $2 \times 8.75 = 17.50$   
 $20 - 17.50 = \underline{2.50}$
117.  $4 \times 4 \times 4 = 64$
118.  $2 \times 2 \times 2 \times 2 = \underline{16 \text{ pcs}}$
119. D
120.  $5 + 4 + 6 = 15$   
 $\frac{3}{8} + \frac{1}{4} + \frac{5}{8} = 1\frac{1}{4}$   
total =  $\boxed{16\frac{1}{4}}$

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121.  $3 \times 12 \times 2 = \boxed{72 \text{ inches}}$

122. 16

123.  $180 - 80 = \boxed{100^\circ}$

124. 30

125. A = 5

B =  $\boxed{7}$

126. 142

$$\begin{array}{r} \phantom{6} \overline{) 142} \\ \underline{6} \phantom{0} \\ 25 \\ \underline{24} \\ 12 \\ \underline{12} \\ 0 \end{array}$$

127.  $6 \times 5 = 30$

$30 \div 3 = \boxed{10 \text{ lb}}$

128. C

129.  $130 - 114 = 16$

$16 \div 4 = 4$

$3 \times 4 = 12$

$12 + 122 = \underline{134}$

130. A

A = 9

D = 1

B = 8

E = 0

C = 5

DCEE =  $\boxed{1500}$

# Answer Key

- |                           |                            |                           |
|---------------------------|----------------------------|---------------------------|
| 1. A                      | 30. D                      | performs at a concert.    |
| 2. C                      | 31. C                      | Choices a, c, and d are   |
| 3. B                      | Tulip, rose, and daisy     | incorrect because none    |
| 4. A                      | are all types of flowers.  | is people who perform.    |
| 5. C                      | A bud is not.              | 48. A                     |
| 6. D                      | 32. D                      | Careful and cautious are  |
| 7. A                      | Evaluate, assess, and      | synonyms (they mean       |
| 8. B                      | appraise are all           | the same thing).          |
| 9. D                      | synonyms; instruct does    | Boastful and arrogant     |
| 10. B                     | not mean the same          | are also synonyms. The    |
| 11. B                     | thing.                     | answer is not choice b    |
| 12. D                     | 33. C                      | because humble means      |
| 13. D                     | A leopard, cougar, and     | the opposite of boastful. |
| 14. C                     | lion all belong to the cat | The answer is not         |
| 15. D                     | family; an elephant does   | choice c or d because     |
| 16. A                     | not.                       | neither means the same    |
| 17. A                     | 34. D                      | as boastful.              |
| 18. B                     | The cornea, retina, and    | 49. D                     |
| 19. A                     | pupil are all parts of the | An aerie is where an      |
| 20. D                     | eye.                       | eagle lives; a house is   |
| 21. B                     | 35. B                      | where a person lives.     |
| 22. A                     | Brass is, not pure, a      | 50. D                     |
| Freeway, interstate, and  | mixture of copper and      | To drizzle is to rain     |
| expressway are all high   | zinc.                      | slowly; to jog is to run  |
| speed highways; a street  | 36. C                      | slowly.                   |
| is for low-speed traffic. | 37. D                      | 51. D                     |
| 23. D                     | 38. A                      | A waitress works in a     |
| Niagara Fall is not a     | 39. C                      | restaurant; a teacher     |
| river.                    | 40. A                      | works in a school.        |
| 24. B                     | Flourish, prosper, and     | 52. D                     |
| An ounce measures         | thrive are all synonyms;   | A conductor leads an      |
| weight; the other         | excite does not mean       | orchestra; a skipper      |
| choices measure length.   | the same thing.            | leads a crew.             |
| 25. C                     | 41. A                      | 53. D                     |
| 26. B                     | 42. B                      | Depressed is an           |
| 27. C                     | 43. A                      | intensification of sad;   |
| 28. A                     | 44. B                      | exhausted is an           |
| 29. C                     | 45. A                      | intensification of tired. |
| Biology, chemistry, and   | 46. D                      | 54. D                     |
| zoology are all branches  | 47. B                      | 55. C                     |
| of science. Theology is   | An actor performs in a     | 56. A                     |
| the study of religion.    | play. A musician           | 57. B                     |



58. B  
Pegasus: a winged horse  
(mythology)
59. B
60. A
61. C
62. B
63. B
64. C
65. D
66. D
67. A
68. C
69. A
70. C
71. C
72. B
73. B
74. B
75. A
76. C
77. C
78. D
79. B
80. D
81. A
82. C
83. B
84. C
85. A
86. B
87. A
88. C
89. B
90. C
91. C
92. A
93. D
94. B
95. C
96. C
97. A
98. B
99. D
100. A
101. Crabby;  
temperamental
102. Acting without  
thought of  
consequences; hasty;  
spontaneous
103. Competitor;  
challenger
104. Rebellious; radical;  
progressive
105. Rule by king or  
queen; crown; single  
supreme power
106. - fate knocking at  
the door  
- death was coming for  
him
107. Students can name  
any three:  
-Fifth Symphony  
-Ninth Symphony  
-Für Elise  
-Moonlight Sonata  
-Ode to Joy
108. -impulsive  
- emotional  
-passionate  
-Romanticism category
109. Students should  
note something like the  
following:  
- At first Beethoven is  
impressed by  
Napoleon's  
revolutionary ways  
-Beethoven is happy to  
get rid of the French  
monarchy  
-when Napoleon  
declares himself  
emperor, Beethoven is  
furious because a single  
ruler is the same as a  
monarchy  
- Beethoven felt that  
Napoleon had betrayed  
the French people
110. Students should  
note something similar  
to the following:  
- Composers must have  
much energy, love,  
passion for music they  
write  
-composers must not be  
discouraged, but  
continue "burning" like  
fire  
-Example: even when  
he was deaf,  
Beethoven's love for  
music continued to  
prevail and he  
continued to write  
-example: he once  
refused to continue  
performing while  
people talked; showing  
his extreme passion for  
the music

# Answer Key

- |   |  |
|---|--|
| 1. A  | 32. 17   |
| 2. B  | 33. 26   |
| 3. B  | 34. 28   |
| 4. C  | 35. 30   |
| The second figure is a part of the first figure (but is not exactly the same as the first figure).  | 36. 32   |
| 5. D  | 37. 17   |
| 6. C  | 38. 35   |
| The second figure is obtained from the first figure by moving the line segment to the opposite side of the square boundary and replacing it with two similar line segments. Also, the element in the lower-left corner gets replaced by two similar elements - one placed in the upper-left and the other placed in the lower-right corner. | 39. 36   |
| 7. D  | 40. 18   |
| 8. A  | 41. 10   |
| 9. D  | 42. 15   |
| 10. A   | 43. 10   |
| In each row, the second figure is obtained from the first figure by reversing the direction of the RHS arrow and the third figure is obtained from the second figure by reversing the direction of both the arrows.   | 44. 29   |
| 11. 160   | 45. 11   |
| 12. 128   | 46. 13   |
| 13. 96  | 47. 15   |
| 14. 256   | 48. 7  |
| 15. 279   | 49. 15   |
| 16. 64  | 50. 8  |
| 17. 217   | 51. 16   |
| 18. 288   | 52. 19   |
| 19. 93  | 53. 5  |
| 20. 124   | 54. 10   |
| 21. 155   | 55. 16   |
| 22. 132   | 56. 11   |
| 23. 99  | 57. 7  |
| 24. 248   | 58. 24   |
| 25. 62  | 59. 20   |
| 26. 192   | 60. 16   |
| 27. 224   | 61. $75 - 53 = \underline{22c}$                          |
| 28. 165   | 62. $7 \times 20 = 140$                                  |
| 29. 186   | 63. $2 \times 4 \times 30 = \underline{\$240}$           |
| 30. 66  | 64. $\frac{1}{5}$  |
| 31. 12  | 65. 46 (Each number is 7 greater than the previous one.) |
|   | 66. A: 4   |
|   | B: 8   |
|   | C: 7   |
|   | $7 \times 4 = \underline{28}$                            |
|   | 67. $32 \times \frac{1}{2} = 16$                         |
|   | 68. $2 \times 32 = 64$                                   |
|   | $\frac{1}{4} \times 64 = 16$                             |
|   | $64 - 16 = 48$   |

## GT3 (Fall, 2019) Issue 5

69. a) 2  
b) 4  
c) 22
70. A, C
71. 2 quarters and 5 dimes
72.  $52 \div 2 = \underline{26}$
73.  $2002 - 1843 = 159$
74.  $12 + 6 = 18$   
 $18 \div 3 = \underline{6 \text{ cakes}}$
75.  $36 \div 4 = 9$   
 $9 \times 9 = 81 \text{ cm}^2$
76.  $50 \times 2 = 100$   
 $100 \times 4 = 400$   
 $400 \times 7 = 2800$
77.  $4 \times 30 = 120$   
 $3 \times 25 = 75$   
 $120 - 75 = 45$
78.  $\frac{1}{4} \times 20 = 5$   
 $20 - 5 = 15$
79.  $(4 + 3 + 7 + 6) \div 4 = \underline{5 \text{ pounds}}$
80.  $30 \div 15 = 2$   
 $2 \times 7 = \underline{14}$
81.  $15 \times 3 = 45$   
 $15 + 45 = \underline{60}$
82.  $4 \times 31 = 124 \text{ meals}$
83. a)  $1800 \div 100 = 18$   
b)  $1800 \div 90 = 20$
84.  $1 \times 5 = 5$   
 $5 \times 5 = 25$
- $25 \times 5 = 125$   
 $125 \times 5 = 625$
85.  $35 - 7.5 - 21 - 2 = 4.5$   
 $4.5 \div 3 = \$1.50$
86.  $390 - 130 = 260$   
 $260 \div 130 = 2$   
 $2 \times 4 = 8 \text{ weeks}$
87.  $10 - 3 = 7 \text{ (now)}$   
 $7 - 3 = 4 \text{ (3 years ago)}$
88.  $2 \times 18 = 36$   
 $36 - 4 = 32$
89.  $2001 - 1992 + 20 = 29$
90.  $53 \div 8 = 6 \text{ R } 5$   
A)  $6 + 1 = 7$ , Monday + 7 = Monday  
B) 5 pages
91. 3 sisters
92.  $15 \div 5 = 3$   
 $3 \times 3 = \underline{\$9.00}$
93. 60
94. 2000
95.  $53 - 5 = 48 \text{ (Cheryl)}$   
 $48 \div 2 = 24 \text{ (Cindy)}$
96.  $8 \times 4 = 32$
97.  $8:15 - 7:20 = 55 \text{ min}$
98.  $400 \times 0.7 = 280$
99.  $6:45 + 1:45 = 8:30 \text{ P.M.}$
100.  $57 - 25 = 32$   
 $32 \div 4 = 8 \text{ friends}$

# Answer Key

- |                            |                           |                             |
|----------------------------|---------------------------|-----------------------------|
| 1. D                       | cape are all landforms; a | noticeable characteristic   |
| 2. B                       | bay is a body of water.   | is its elasticity. Choice d |
| 3. B                       | 29. B                     | is incorrect because        |
| 4. B                       | 30. B                     | rubber has flexibility.     |
| 5. A                       | 31. D                     | 45. B                       |
| 6. D                       | The core, seeds, and      | Verve and enthusiasm        |
| 7. C                       | pulp are all parts of an  | are synonyms; devotion      |
| 8. C                       | apple. A slice would be   | and reverence are           |
| 9. C                       | a piece taken out of an   | synonyms.                   |
| 10. B                      | apple.                    | 46. D                       |
| 11. B                      | 32. B                     | A bristle is a part of a    |
| 12. D                      | 33. C                     | brush; a key is a part of   |
| 13. D                      | 34. A                     | a piano.                    |
| 14. C                      | 35. B                     | 47. A                       |
| 15. C                      | 36. B                     | A palm (tree) has           |
| 16. D                      | 37. C                     | fronds; a porcupine has     |
| 17. A                      | 38. D                     | quills.                     |
| 18. C                      | 39. C                     | 48. D                       |
| 19. B                      | 40. A                     | Dependable and              |
| 20. A                      | 41. B                     | capricious are              |
| 21. B                      | 42. B                     | antonyms; capable and       |
| 22. D                      | 43. D                     | inept are antonyms.         |
| 23. B                      | An odometer is an         | 49. D                       |
| The guitar, violin, and    | instrument used to        | 50. C                       |
| cello are stringed         | measure mileage. A        | 51. D                       |
| instruments; the flute is  | compass is an             | 52. C                       |
| a wind instrument.         | instrument used to        | 53. B                       |
| 24. C                      | determine direction.      | 54. D                       |
| 25. B                      | Choices a, b, and c are   | 55. D                       |
| 26. D                      | incorrect because none    | 56. D                       |
| The first three choices    | is an instrument.         | 57. C                       |
| are all synonyms.          | 44. C                     | Secretly is the opposite    |
| 27. A                      | A sponge is a porous      | of openly, and silently is  |
| An index, glossary, and    | material. Rubber is an    | the opposite of noisily.    |
| chapter are all parts of a | elastic material. Choice  | Choices a and b are         |
| book. Choice a does not    | a is incorrect because    | clearly not the opposites   |
| belong because the         | rubber would not          | of silently. Choice d       |
| book is the whole, not a   | generally be referred to  | means the same thing as     |
| part.                      | as massive. The answer    | silently.                   |
| 28. C                      | is not choice b because   | 58. B                       |
| A peninsula, island, and   | even though rubber is a   | A yard is a larger          |
|                            | solid, its most           | measure than an inch (a     |

- yard contains 36 inches). A quart is a larger measure than an ounce (a quart contains 32 ounces). Gallon (choice a) is incorrect because it is larger than a quart. Choices c and d are incorrect because they are not units of measurement.
59. C  
A cacophony is an unpleasant sound; a stench is an unpleasant smell.
60. D  
Umbrage and offense are synonyms; elation and jubilation are synonyms.
61. C  
62. D  
63. B  
64. A  
65. D  
66. B  
67. A  
68. C  
69. C  
70. B  
71. A  
72. A  
73. C  
74. B  
75. C  
76. D  
77. C  
78. A  
79. D  
80. D  
81. B  
82. A  
83. D  
84. B  
85. C  
86. D
87. A  
88. A  
89. Written notes; characters; symbols  
90. Exiting; emotional; moving  
91. Spontaneity; ad-libbing; without practice  
92. Type; category; style  
93. Beat; rhythm; pace  
94. -flutes  
-violins  
-trombones  
-clarinets  
95. -cello  
-electric guitar  
96. -Each musician might change either of the following:  
-tempo/speed  
-dynamics/volume  
97. Students should discuss the following:  
-The variables include meter, tempo, dynamics, notes, number of instruments, type of instruments, voices/singing  
-it sounds similar because musicians usually play it as written rather than improvising  
98. Students should note something similar to the following:  
-classical music is usually played as written; not much variance of tempo, dynamics, notes  
-jazz music is often improvised; performers do not play exactly as written, but make up parts as they play  
-jazz musicians interpret the music more; may change tempo, dynamics, notes  
-each jazz performer may play the same piece with his or her own style  
-classical music is more straightforward, precise
99. A  
100. A  
101. D  
102. B  
103. D  
104. B  
105. C  
106. A  
107. A  
108. A  
109. C  
110. A

# Answer Key

- |  |   |
|--|---|
| 1. D   | 37. 4   |
| 2. B   | 38. 27  |
| 3. D   | 39. 7   |
| In each row, there are 3 types of shadings of circles - a circle is unshaded, another circle has its right half shaded with vertical lines and yet another circle has its upper half shaded with horizontal lines. There are three specified positions of the two triangles each of which is used only once in a row. Also, two of the figures in each row have one triangle shaded. | 40. 3   |
| 4. A   | 41. 17  |
| 5. B   | 42. 30  |
| 6. 105   | 43. 19  |
| 7. 231   | 44. 16  |
| 8. 272   | 45. 19  |
| 9. 238   | 46. 9   |
| 10. 280  | 47. 33  |
| 11. 198  | 48. 31  |
| 12. 136  | 49. 6   |
| 13. 204  | 50. 24  |
| 14. 297  | 51. 12  |
| 15. 315  | 52. 17  |
| 16. 102  | 53. 24  |
| 17. 175  | 54. 23  |
| 18. 245  | 55. 17  |
| 19. 306  | 56. 91  |
| 20. 68   | 57. $8 - \frac{1}{2}(12) = 2$   |
| 21. 210  | 58. $32 \div 4 = 8$<br>$8 \times 3 = 24$  |
| 22. 70   | 59. $1 - \frac{1}{4} = \frac{3}{4}$<br>$120 \times \frac{3}{4} = \underline{\$90.00}$   |
| 23. 140  | 60. $12 \times \frac{3}{2} = 18$  |
| 24. 264  | 61. $\frac{5}{15} = \frac{1}{3}$<br>So, the denominator is <span style="border: 1px solid black; padding: 0 2px;">15</span> . |
| 25. 170  | 62. 3, 6, 9   |
| 26. 37   | 63. $2013 - 1989 - 6 = 18$  |
| 27. 19   | 64. half dozen = $12 \div 2 = 6$<br>$6 \times 10 = 60$ ounces   |
| 28. 20   | 65. $91 + 81 + 92 = 264$<br>$264 \div 3 = 88$   |
| 29. 27   | 66. $50 \times 16 = 800$ ounces   |
| 30. 28   | 67. $80 \div 2 = 40$<br>$40 \times 5 = 200$   |
| 31. 43   | 68. $\frac{1}{3} \times 36 = 12$<br>$\frac{1}{4} \times 36 = 9$<br>$10 + 12 + 9 = 31$<br>$36 - 31 = \underline{\$5.00}$       |
| 32. 22   | 69. $7 \times 0.25 + 5 \times 0.5 = 1.75 + 2.5 = \underline{\$2.00}$  |
| 33. 30   | 70. $\frac{1}{3}(11 + 12 + 13) = \underline{12}$  |
| 34. 46   |   |
| 35. 24   |   |
| 36. 24   |   |

## GT3 (Fall, 2019) Issue 6

71. D
72. 2 quarters + 2 nickels + 3 pennies = 67¢
73.  $3 \times 7 \times 4 = \underline{84 \text{ meals}}$
74.  $4 \times 8 = 32$
75.  $\frac{1}{2} \times 12 = 6$   
 $6 + 5 = \underline{11}$
76.  $12.60 \times \frac{1}{2} = 6.30$   
 $6.30 \times 5 = \$31.50$
77. D:  $14 - 8 = 6$   
 C:  $6 \div 2 = 3$   
 B:  $10 - 3 = 7$
78. 1 (Add  $\frac{1}{4}$ .)
79.  $2 \times 26.5 = 53$   
 $66 - 53 = 13$
80.  $3 \times 6 = \underline{18 \text{ ft}}$
81. They all have the same number of pencils.  
 B:  $\frac{1}{3}$   
 C:  $\frac{1}{2}(1 - \frac{1}{3}) = \frac{1}{3}$   
 A:  $1 - \frac{1}{3} - \frac{1}{3} = \frac{1}{3}$
82. Andrea has the least.  
 B:  $\frac{1}{2}$
- C:  $\frac{1}{3}(1 - \frac{1}{2}) = \frac{1}{6}$   
 A:  $1 - \frac{1}{2} - \frac{1}{6} = \frac{1}{3}$
83.  $\frac{2}{3} \times 18 = 12$   
 $12 \times 15 = \$180$
84.  $\boxed{4} \times \frac{1}{8} = \frac{1}{2}$
85.  $\frac{1}{3} \times 24 = 8$   
 $24 - 8 = 16$
86. C
87.  $18 - 9 = 9$   
 $36 - 9 = \underline{27}$
88.  $6 \times 5 \times 4 = \underline{120 \text{ hours}}$
89. 1 more softball
90. David:  $89 + 4 = 93$   
 Ashley:  $\frac{1}{3} \times 93 = 31$   
 Stephen:  $2 \times 31 = \underline{62 \text{ pounds}}$
91. B
92.  $(3 + 4 + 5) \div 3 = 4$
93.  $(13 + 15) \div 2 = 14$
94.  $(26 + 20) \div 2 = 23$
95.  $(80 + 100 + 95 + 85) \div 4 = 90$

# Answer Key

- |  |  |  |
|--|--|--|
| 1. D   | 30. B  | of a professor; being imaginative is a trait of an inventor.   |
| 2. B   | Two, six, and eight are all even numbers; three is an odd number.                              | 44. C  |
| 3. D   | 31. C  | 45. C  |
| 4. D   | 32. C  | 46. C  |
| 5. A   | The scythe, knife, and saw are all cutting tools.  | 47. C  |
| 6. B   | Pliers are tools, but they are not used for cutting.   | 48. A  |
| 7. C   | 33. D  | 49. A  |
| 8. C   | Rye, sourdough, and pumpernickel are types of bread. A loaf is not a bread type.               | 50. D  |
| 9. B   | 34. B  | 51. A  |
| 10. C  | A branch, leaf, and root are all parts of a tree.  | 52. D  |
| 11. C  | The dirt underneath is not a part of the tree.   | A gym is a place where people exercise. A restaurant is a place where people eat. Food (choice a) is not the answer because it is something people eat, not a place or location where they eat. The answer is not choice b or c because neither represents a place where people eat. |
| 12. B  | 35. B  | 53. D  |
| 13. A  | 36. D  | A marathon is a long race and hibernation is a lengthy period of sleep. The answer is not choice a or b because even though a bear and winter are related to hibernation, neither completes the analogy. Choice c is incorrect because sleep and dream are not synonymous.           |
| 14. B  | 37. D  | 54. D  |
| 15. B  | 38. C  | A pen is a tool used by a poet. A needle is a  |
| 16. B  | 39. C  |  |
| 17. B  | Defendant, prosecutor, and judge are all persons involved in a trial. A trial is not a person. |  |
| 18. B  | 40. D  |  |
| 19. A  | 41. D  |  |
| 20. D  | A pedal propels a bicycle; an oar propels a canoe.   |  |
| 21. D  | 42. A  |  |
| 22. C  | A spy acts in a clandestine manner; an accountant acts in a meticulous manner.                 |  |
| 23. D  | 43. B  |  |
| 24. C  | Being erudite is a trait   |  |
| The wing, fin, and rudder are all parts of an airplane.  |  |  |
| 25. D  |  |  |
| 26. D  |  |  |
| Fair, just, and equitable are all synonyms meaning impartial. Favorable means expressing approval. |  |  |
| 27. B  |  |  |
| Dodge, duck, and avoid are all synonyms meaning evade. Flee means to run away from.                |  |  |
| 28. A  |  |  |
| 29. C  |  |  |



- tool used by a tailor.  
The answer is not choice a, b, or c because none is a person and therefore cannot complete the analogy.
55. A  
Pastoral describes rural areas; metropolitan describes urban areas.
56. A  
An odometer measures distance; a scale measures weight.
57. A  
Jaundice is an indication of a liver problem; rash is an indication of a skin problem.
58. C  
Pulsate and throb are synonyms, as are examine and scrutinize.
59. D
60. B
61. B
62. A
63. C
64. B
65. C
66. A
67. A
68. D
69. C
70. B
71. C
72. B
73. D
74. C
75. C
76. D
77. B
78. C
79. A
80. B
81. A
82. C
83. B
84. C
85. D
86. A
87. B
88. D
89. To mix and re-record a song to make a new version; to combine musical elements
90. Person who establishes something with a partner
91. Hesitant; unwilling; unenthusiastic
92. Physical stance; body positions
93. Learn; become proficient; acquire skills
94. -cooperation  
-teamwork  
-respect  
-how to be a lady or gentleman
95. -started with only 30 students in one fifth-grade classroom; now has more than 7,000 students in 68 NYC public schools
96. -rumba  
-tango  
-swing  
-merengue  
-fox-trot
97. Students should note something similar to the following:  
-ballroom dancing has been around since the Middle Ages (500-1500)  
-was popular at fairs and festivals in the 1400s  
-dances came from all over the world  
-Rumba: Spanish, African, Cuban roots  
-Tango: Argentina  
-Swing: American jazz  
-Merengue: Dominican Republic  
-Fox-trot: American  
-Waltz  
-Disco  
-Macarena
98. Students should note the following; answers will vary:  
-dancing and playing sports both require skills such as: balance, coordination, concentration, physical conditioning, teamwork, endurance, following directions  
-students can compare to a specific sport they play  
-students should explain why they would or would not like to learn to dance at school
99. B
100. C
101. A
102. D
103. B
104. B
105. B
106. A
107. D
108. C
109. C
110. A

# Answer Key

1. 18	43. 4
2. 2	44. 3
3. 7	45. 32
4. 24	46. 2
5. 15	47. 54
6. 3	48. 36
7. 2	49. 16
8. 3	50. 7
9. 4	51. 7
10. 4	52. 4
11. 4	53. 7
12. 8	54. 48
13. 5	55. 6
14. 8	56. 48
15. 2	57. 12
16. 3	58. 7
17. 3	59. 5
18. 4	60. 9
19. 8	61. 20
20. 9	62. 18
21. 12	63. 10
22. 16	64. 7
23. 14	65. 34
24. 4	66. 57
25. 2	67. 48
26. 3	68. 42
27. 19	69. 28
28. 10	70. 27
29. 25	71. 28
30. 14	72. 23
31. 38	73. 9
32. 17	74. 25
33. 17	75. 27
34. 28	76. 1
35. 12	77. 324
36. 38	78. 36
37. 19	79. 48
38. 252	80. 96
39. 96	81. A
40. 224	Same function for delivering the work.
41. 9	82. B
42. 18	communication v.s. transportation.

# GT3 (Fall, 2019) Issue 7

83. C  
camera to make photo  
tea kettle to make a cup of tea
84. A  
child to adult  
caterpillar to butterfly (metamorphosis)
85. D  
button is part of a shirt  
buckle is part of a belt
86. D  
musical instruments & carpentry tool

87. C  
leaf is part of a tree  
feather is part of a bird
88. A  
cutting tool v.s. water container
89. **Answer: A**

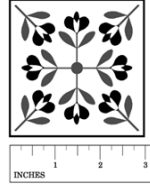
**Explanation:**

**In the first series, the closed figure loses sides one by one and the open figure gains sides one by one as the series proceeds.**

90. **Answer: C**  
**Explanation:**  
In the third series, the image becomes simpler as the series proceeds.

91. C
92.  $84 \div 6 = \underline{\$14}$
93. C
94. 206 inches
95. 37
96.  $\frac{1}{4}$  hr = 15 min  
 $\frac{1}{3}$  hr = 20 min  
 $15 + 20 = \underline{35 \text{ min}}$
97. D
98. 3,537,000
99. B
100. 38
101. 0.36 mile
102. 5, 8, 11, 14, 17,  $\underline{20}$
103.  $5+8+11+14+17+20 = \underline{75}$
104.  $30 - 8 = 22$
105.  $72 \div 6 = \underline{12}$
106. A

107. C
108. 1 to 9: 1 digit each  
10 to 99: 2 digits each  
100: 3 digits  
 $9 + 2(90) + 3 = \underline{192}$
109. 2 hr 7 min
110.  $3 \times 3 = \underline{9 \text{ sq. inches}}$



111.  $9:15 + 0:30 = \underline{9:45 \text{ A.M.}}$
112.  $\square = 3$
113. 13
114. D
115. 60,197
116. 4
117.  $0.25 \times 7 = \$1.75$
118. 3201
119.  $28 \div 4 = \underline{7}$
120. From left to right:  
 $\frac{1}{10}, \frac{1}{6}, \frac{1}{3}, \frac{1}{2}$
121. D
122.  $2 \times 10 + 5 \times 15 + 2 \times 25$   
 $= 20 + 75 + 50$   
 $= 145$
123. 2 pencils + 1 pen + 2 erasers
124. C  
 $27 \div 5 = 5R2$
125. B
126. 16
127.  $3 \times 6 + 12 = \underline{30}$
128.  $12 \times 5 = \underline{\$60}$
129. B  
 $K = 2 \times 7 = 14$   
 $H = 3 \times 4 = 12$   
 $14 - 12 = 2 \text{ squares}$   
 $2 \times 2 = \underline{4 \text{ sq. ft}}$
130. C  
 $\frac{5}{8} + \frac{1}{4} = \frac{7}{8}$   
 $1 - \frac{7}{8} = \frac{1}{8}$

# Answer Key

- |  |  |   |
|--|--|---|
| 1. C   | 26. A  | tying. The tape is not used in the same way.  |
| 2. C   | 27. B  |   |
| 3. A   | 28. B  | 38. A   |
| 4. C   | The mayor, governor, and senator are all persons elected to government offices; the lawyer is not an elected official.                         | arc is not straight.  |
| 5. C   |  | 39. A   |
| 6. A   |  | 40. B   |
| 7. D   |  | 41. B   |
| 8. D   |  | 42. C   |
| 9. A   |  | 43. B   |
| 10. D  | 29. B  | 44. C   |
| 11. D  | Unique, rare, and exceptional are all synonyms. Beautiful has a different meaning.   | 45. D   |
| 12. C  |  | 46. D   |
| 13. D  |  | 47. B   |
| 14. C  |  | An artist makes paintings; a senator makes laws. The answer is not choice a because an attorney does not make laws and a senator is not an attorney. Choice c is incorrect because a senator is a politician. Constituents (choice d) is also incorrect because a senator serves his or her constituents. |
| 15. B  | 30. B  |   |
| 16. D  | Area, circumference, and quadrilateral are all terms used in the study of geometry. Variable is a term generally used in the study of algebra. |   |
| 17. D  |  |   |
| 18. B  |  |   |
| 19. D  |  |   |
| 20. B  |  |   |
| 21. C  | 31. A  |   |
| The noun, preposition, and adverb are classes of words that make up a sentence. Punctuation belongs in a sentence, but punctuation is not a class of word. | The heart, liver, and stomach are all organs of the body. The aorta is an artery, not an organ.  |   |
| 22. D  | 32. A  | 48. C   |
| 23. B  | The lobster, crab, and shrimp are all types of crustaceans; an eel is a fish.  | A lizard is a type of reptile; a daisy is a type of flower. Choices a and b are incorrect because a petal and a stem are parts of a flower, not types of flowers. Choice d is incorrect because an alligator is another type of reptile, not a type of flower.  |
| Barrack: a group of buildings used to house military personnel.  |  |   |
| 24. D  | 33. D  |   |
| 25. A  | 34. D  |   |
| A circle, oval, and sphere are all circular shapes with no angles. A triangle is a different kind of shape with angles and three straight sides.           | 35. D  |   |
|  | 36. B  |   |
|  | The couch, table, and chair are pieces of furniture; the rug is not.   |   |
|  | 37. A  | 49. C   |
|  | The yarn, twine, and cord are all used for   | An elephant is a  |

- pachyderm; a kangaroo is a marsupial.
50. A  
Division and section are synonyms; layer and tier are synonyms.
51. C  
Hegemony means dominance; autonomy means independence.
52. A  
The deltoid is a muscle; the radius is a bone.
53. D  
Slapstick results in laughter; horror results in fear.
54. D
55. C
56. C
57. A
58. D
59. B
60. C
61. D
62. D
63. C
64. D
65. A
66. D
67. D
68. B
69. C
70. A
71. C
72. A
73. D
74. B
75. B
76. D
77. D
78. A
79. C
80. D
81. B
82. A
83. B
84. C
85. Slow to show emotion; shy; quiet
86. Not easily understood; confusing
87. device that keeps rhythm; device that keeps tempo for practicing music
88. Consumed; captivated; preoccupied
89. Recognizing; supporting; noticing
90. -at first, he was frustrated by playing jazz, but he practiced regularly and learned to enjoy it
91. -his fingers tripped over the keys  
-he was confused by the rhythm and chords
92. -Dave Brubeck
93. Students should note the following:  
-his mom told him to keep trying  
-his dad told him to do what makes him happy  
-they supported him by encouraging him to keep trying; not to quit, but also to do what made him happy  
-his parents encouraged him to try hard, but didn't force him
94. Students should note any of the following:  
-the more he practiced, the more comfortable he became with jazz  
-once he was comfortable, he began to enjoy it  
-then he became
- obsessed with learning  
"everything he had originally hated about it"  
-he found good in what he once thought was bad  
-he became good at jazz piano so enjoyed it more  
-he joined a band with his friends  
-he had a favorite jazz musician  
-he was thankful his parents had encouraged him to keep trying
95. B
96. A
97. D
98. D
99. C
100. B
101. A
102. D
103. B
104. B
105. D
106. A

# Answer Key

1. 9	43. 4
2. 8	44. 7
3. 6	45. 4
4. 72	46. 25
5. 7	47. 7
6. 6	48. 4
7. 9	49. 2
8. 12	50. 30
9. 6	51. 8
10. 3	52. 2
11. 4	53. 4
12. 12	54. 6
13. 7	55. 8
14. 4	56. 8
15. 2	57. 24
16. 40	58. 4
17. 2	59. 3
18. 3	60. 32
19. 9	61. 14
20. 9	62. 4
21. 8	63. 1
22. 22	64. 15
23. 9	65. 11
24. 22	66. 33
25. 15	67. 22
26. 18	68. 21
27. 16	69. 72
28. 15	70. 18
29. 20	71. 24
30. 11	72. 48
31. 43	73. 8
32. 13	74. 1
33. 56	75. 6
34. 24	76. 24
35. 15	77. 24
36. 14	78. 336
37. 23	79. 243
38. 10	80. 324
39. 10	81. <b>Answer: C</b>
40. 26	<b>Explanation:</b>
41. 7	Only the third series follows the given rule.
42. 2	

82. **Answer:** D  
**Explanation:**  
 Only the fourth series follows the given rule.

- 83. C
- 84. A
- 85. B
- 86. C
- 87. B

In the second series, the image becomes simpler as the series proceeds. The trapezium inside the cloud loses its side one by one as the sequence proceeds one step forward to the right side.

88. **Answer:** A  
**Explanation:**  
 Only in the first series, the image rotates 45 degrees as it moves towards the right side. In the second series, it turns 30 degrees; in third series, it rotates 90 degrees, and in the fourth series, it rotates by 15 degrees as it moves one step forward towards the right side. See the corner of the image, which forms a small square, to understand the movement of the image.

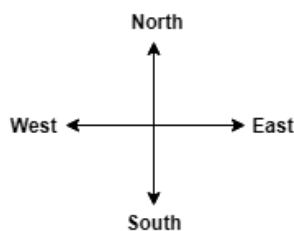
89. **Answer:** D  
**Explanation:**  
 Only in the fourth series, an image formed by curved lines alternates with an image formed by straight lines. The images in the first, second and third series do not follow this rule.

90. **Answer:** A  
**Explanation:**  
 Only in the first series, the sides of the shapes increase by one as we move one step forward towards the right side, e.g., the shapes in the first series have 3, 4, 5 and 6 sides respectively. In the remaining series, the sides of the shapes are not increasing by one as we move towards the right side.

91. **Answer:** B  
**Explanation:**  
 Only in the second series, the outer shape disappears gradually, and the inner shape appears gradually as we move one step forward towards the right side. The third series follows the reverse order; the outer shape appears gradually, and inner shape disappears gradually. The first and fourth series also do not follow the given rule. So, the answer is option B.

92. **Answer:** A  
**Explanation:**

Only the arrows of the first series can be combined without changing their directions to form a meaningful image as shown below:



This image indicates the four cardinal directions, which are generally denoted by their initials N, E, S, and W. The arrows of any other series can't be combined, without changing their directions, into any meaningful information.

93. **Answer:** C  
**Explanation:**  
 In the first series, as the image moves one step forward, the number of arrows increases by two, e.g. 2, 4, 6 and 8. In the second series, the number of arrows increases by 2, e.g. 1, 3, 5 and 7. In the fourth series, the number of arrows increases by one. Only the arrows of the third series do not follow any specific pattern, e.g. 2,3,2,4.

- 94. D
- 95. 37
- 96.  $24 + 8 - (8 + 13) = 11$
- 97.  $\frac{5}{8} \times 12 = 10$  gallons  
 $10 \div \frac{1}{4} = 40$   
 $40 \times 5 = 200$  (sec) = 3 min 20 sec
- 98.  $4.5 \times 4 = 18$   
 $18 \div 6 = 3$  inches
- 99. C
- 100. D
- 101.  $3:30 + 2:30 = 6:00$  pm
- 102. A
- 103. 1, 3, 9, 27, 81, 243  
 1, .3, 9, 2.7, 81, 24.3
- 104.  $5 \times 6 \times 4 = 120$
- 105. C
- 106. Candace =  $14 - 2 = 12$   
 Brenda =  $12 \div 2 = 6$  yrs old
- 107.  $8 \times 8 \div (2 \times 8) = 4$
- 108. D
- 109.  $162 \div 9 = 18$
- 110. A
- 111. A
- 112.  $36 + 2 \times 4 = 44$

## GT3 (Fall, 2019) Issue 8

113.  $4 + 2 + 3 = 9$

$72 \div 9 = 8$  apples (per basket)

$8 \times 4 = \boxed{32}$  (Marie)

$8 \times 2 = \boxed{16}$  (Sarah)

$8 \times 3 = \boxed{24}$  (Lance)

114. 3.09

115. D

116. 2

117. C

118.  $15 - (3 + 7) = \underline{5}$  brownies

119. 32

120. July 26

121.  $40 \times (4.5 - 4.25) = 40 \times 0.25 = \boxed{\$10}$

122. 3

123. 1

124. 3 primes: 11, 13, 17

125. 11:30 A.M.

126. 9

127. 7.155

128. D

129.  $5 \times 250 = 1250$

130.  $14 \times 8 \times 3 = 112 \times 3 = \underline{336}$

131. All the sums are  $5 + 6 + 7 = 18$ .

5	10	3
4	6	8
9	2	7

132.  $40 + 60 + 30 + 20 - (1 + 2 + 1 + 2)$

$= 150 - 6$

$= \underline{\$1.44}$

133. 31



# Answer Key

- |                           |                            |                               |
|---------------------------|----------------------------|-------------------------------|
| 1. A                      | choices repeat a 2-letter  | 47. D                         |
| 2. A                      | sequence.                  | 48. D                         |
| 3. A                      | 26. B                      | 49. C                         |
| 4. C                      | 123 are consecutive, the   | 50. D                         |
| 5. B                      | others are obtained by     | 51. C                         |
| 6. D                      | adding 2.                  | 52. B                         |
| 7. A                      | 27. C                      | 53. D                         |
| 8. A                      | ACF is not a sequence      | 54. C                         |
| 9. B                      | of consecutive letters.    | 55. C                         |
| 10. C                     | 28. C                      | 56. A                         |
| 11. A                     | This is a capital letter   | 57. D                         |
| 12. C                     | small letter relationship. | 58. A                         |
| 13. A                     | All choices have the       | 59. B                         |
| 14. B                     | middle two letters         | 60. C                         |
| 15. D                     | capitalized except c.      | 61. B                         |
| 16. C                     | 29. A                      | 62. B                         |
| 17. B                     | This is a vowel and        | 63. D                         |
| 18. B                     | consonant relationship.    | 64. A                         |
| 19. A                     | All of the choices are     | 65. C                         |
| 20. C                     | only consonants.           | 66. B                         |
| 21. C                     | 30. C                      | 67. A                         |
| A kite is not a type of   | This is a vowel and        | 68. D                         |
| plane.                    | consonant relationship.    | 69. Thought about             |
| 22. D                     | All of the choices have    | seriously; considered;        |
| This is a relationship of | 2 vowels at the end.       | contemplated                  |
| words question. All of    | 31. D                      | 70. Period of ten years       |
| the choices are           | 32. B                      | 71. Extreme greatness;        |
| synonyms of count,        | 33. D                      | immensity; magnitude          |
| except figure.            | 34. C                      | 72. Horse; stallion           |
| 23. B                     | 35. A                      | 73. Rough; unkempt; messy     |
| This is a capital small   | 36. B                      | 74. -563 feet high by 641     |
| letter relationship. All  | 37. B                      | feet long                     |
| choices have one capital  | 38. B                      | -the largest sculpture in     |
| letter except B, which    | 39. A                      | the world                     |
| has two.                  | 40. C                      | 75. -by blasting out millions |
| 24. D                     | 41. D                      | of tons of granite to         |
| BD is not a sequence of   | 42. B                      | block out the form of         |
| consecutive letters.      | 43. D                      | the sculpture                 |
| 25. C                     | 44. C                      | 76. -Thunderhead              |
| This is a repetition      | 45. D                      | Mountain                      |
| pattern. All of the       | 46. C                      |                               |

77. Students should note the following:  
 -they both want to see the project continue to move forward  
 -they are not in a hurry  
 -the sculptor thought about the decision for seven years before he agreed to start; this shows he was not in a rush  
 -Ruth, the sculptor's wife, says "It didn't make a difference" to her husband when it will be finished; he just wanted to see progress
78. Students should note something similar to the following:  
 -Standing Bear wanted the "white man to know the red man has great heroes, too"  
 -since Americans memorialized great presidents, like on Mount Rushmore, Standing Bear wanted equal representation of Native American heroes  
 -Crazy Horse, and other Native Americans played key roles in shaping the United States  
 -Crazy Horse was their fallen chief representing the Sioux Indians
79. A  
 80. D  
 81. B  
 82. A  
 83. D  
 84. C  
 85. C
86. C  
 87. A  
 88. B  
 89. D  
 90. B  
 91. C  
 92. C  
 93. D  
 94. D  
 95. A  
 96. B  
 97. A  
 98. D  
 99. B  
 100. B  
 101. C  
 102. A  
 103. C  
 104. D  
 105. C  
 106. C  
 107. B  
 108. D  
 109. D  
 110. D  
 111. A  
 112. C  
 113. B  
 114. D  
 115. C  
 116. A  
 117. D  
 118. B
- An ounce measures weight; the other choices measure length.
119. D  
 Tire, steering wheel, and engine are all parts of a car.
120. C  
 Tulip, rose, and daisy are all types of flowers.  
 A bud is not.
121. A  
 122. B  
 An ounce measures weight; the other choices measure length.
123. D  
 Tire, steering wheel, and engine are all parts of a car.
124. C  
 Tulip, rose, and daisy are all types of flowers.  
 A bud is not.
125. A  
 Loaf, sourdough, and pumpernickel are types of bread. A rye is not a bread type. Loaf - Bread that is shaped and baked in one piece and usually sliced before being eaten.  
 Pumpernickel - Dark, dense German bread made from coarsely ground whole-grain rye.  
 Sourdough - Leaven for making bread, consisting of fermenting dough, typically that left over from a previous batch.  
 Rye - A wheatlike cereal plant that tolerates poor soils and low temperatures.
126. B  
 The guitar, violin, and cello are stringed instruments; the flute is a wind instrument.
127. B  
 Dodge, duck, and avoid are all synonyms meaning evade. Flee means to run away from.
128. B  
 A branch, leaf, and root are all parts of a tree.

The dirt underneath is  
not a part of the tree.

129. A

Freeway, interstate, and  
expressway are all high-  
speed highways; a street  
is for low-speed traffic.

130. C

Heading, body, and  
closing are all parts of a  
letter; the letter is the  
whole, not a part.

# Answer Key

- |        |   |
|--------|---|
| 1. 8   | 43. 12  |
| 2. 3   | 44. 48  |
| 3. 6   | 45. 9   |
| 4. 2   | 46. 6   |
| 5. 3   | 47. 7   |
| 6. 9   | 48. 3   |
| 7. 9   | 49. 9   |
| 8. 36  | 50. 7   |
| 9. 2   | 51. 3   |
| 10. 7  | 52. 21  |
| 11. 35 | 53. 6   |
| 12. 36 | 54. 7   |
| 13. 9  | 55. 8   |
| 14. 56 | 56. 4   |
| 15. 5  | 57. 72  |
| 16. 28 | 58. 9   |
| 17. 7  | 59. 15  |
| 18. 35 | 60. 5   |
| 19. 16 | 61. 4   |
| 20. 4  | 62. 2   |
| 21. 9  | 63. 1   |
| 22. 17 | 64. 14  |
| 23. 9  | 65. 12  |
| 24. 1  | 66. 7   |
| 25. 7  | 67. 7   |
| 26. 14 | 68. 20  |
| 27. 1  | 69. 21  |
| 28. 7  | 70. 36  |
| 29. 7  | 71. 40  |
| 30. 19 | 72. 34  |
| 31. 64 | 73. 43  |
| 32. 9  | 74. 20  |
| 33. 75 | 75. 39  |
| 34. 16 | 76. 26  |
| 35. 11 | 77. 17  |
| 36. 39 | 78. 19  |
| 37. 32 | 79. 84  |
| 38. 69 | 80. 48  |
| 39. 67 | 81. On odd days, she spends \$1.50. On even days, she spends \$3.00. If you add those together, you get \$4.50. \$10.00 take away \$4.50 equals \$5.50. To check it, add \$5.50 and \$4.50 together. They should equal <u>\$10.00</u> . |
| 40. 29 |   |
| 41. 5  |   |
| 42. 48 |   |

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82. 9  
 83.  $20 \div 6 = \boxed{3}$  R2  
 84.  $\boxed{2}$  oranges left  
 85. B  
 86.  $3 \times 25 = \underline{75}$  pets  
 87. C  
 88. Yellow  
 89.  $20 - 8 - 3 = \underline{\$9}$   
 90.  $48 \div 12 = 4$   
 91. 320  
 92. C  
 93.  $24 \div 3 = \boxed{8}$   
 94. B  
 95.  $\text{LCM}(4, 6, 10) = 60$   
 $3:00 + 1 = \boxed{4:00}$   
 96. D  
 97. A  
 98. A  
 99. Ray  
 100.  $\boxed{2}$  pizzas will be enough.  
 $\frac{1}{4} + \frac{3}{4} + \frac{3}{8} + \frac{1}{2} = 1\frac{7}{8}$   
 101.  $24 \div 2 = 12$   
 102. C  
 103. A  
 104. D  
 105.  $27 - 3 = 24$   
 $24 \div 2 = \boxed{12}$   
 106.  $12 + 3 = \boxed{15}$   
 107. 28.9  
 108.  $402 \times 9 = \underline{3618}$

109. B  
 110. 970  
 111. 28 days  
 112. 5,000 meters  
 113.  $300 + \frac{1}{2}(300) = \underline{450}$   
 114.  $8 + 24 = \boxed{32c}$   
 115. D  
 116.  $1 + 2 + 3 + 4 + 5 + 6 = \boxed{21}$   
 117. B  
 $12:00 - 11:16 = 0:44$   
 $0:44 + 1:22 = 1:66 = 2:06 = 2 \text{ hr } 6 \text{ min}$

118.  $10 - 2 \times 2.5 = \boxed{5}$   
 119. A = 3  
 since  $12 + 3 + 5 + 6 = 26$

12	3	5	6
	11		
			7

- B = 8  
 since  $11 = 3 + 8$

12	3	5	6
	11		
	8		7

- C = 1  
 since  $7 = 1 + 6$

12	3	5	6
	11		1
	8		7

120. The puzzle is finished as below.

12	3	5	6
10	11	4	1
2	8	9	7

# Answer Key

1. A  
 2. A  
 3. D  
 4. B  
 5. C  
 6. A  
 7. A  
 8. C  
 9. A  
 10. C  
 11. B  
 12. B  
 13. A  
 14. D  
 15. B  
 16. C  
 17. A  
 18. A  
 19. C  
 20. D  
 21. A  
 The yarn, twine, and cord are all used for tying. The tape is not used in the same way.  
 22. C  
 A leopard, cougar, and lion all belong to the cat family; an elephant does not.  
 23. B  
 The couch, table, and chair are pieces of furniture; the rug is not.  
 24. D  
 The cornea, retina, and pupil are all parts of the eye.  
 25. C  
 The noun, preposition, and adverb are classes of words that make up a sentence. Punctuation belongs in a sentence, but punctuation is not a class of word.  
 26. A  
 An index, glossary, and chapter are all parts of a book. Choice a does not belong because the book is the whole, not a part  
 27. D  
 The first three choices are all synonyms.  
 28. C  
 The wing, fin, and rudder are all parts of an airplane.  
 29. D  
 The core, seeds, and pulp are all parts of an apple. A slice would be a piece taken out of an apple.  
 30. C  
 A peninsula, island, and cape are all landforms; a bay is a body of water.  
 31. D  
 Fair, just, and equitable are all synonyms meaning impartial. Favorable means expressing approval.  
 32. B  
 Unique, rare, and exceptional are all synonyms. Beautiful has a different meaning.  
 33. D  
 Acute, right, and obtuse are geometric terms describing particular angles. Parallel refers to two lines that never intersect.  
 34. A  
 A circle, oval, and sphere are all circular shapes with no angles. A triangle is a different kind of shape with angles and three straight sides.  
 35. C  
 The scythe, knife, and saw are all cutting tools. Pliers are tools, but they are not used for cutting.  
 36. C  
 Biology, chemistry, and zoology are all branches of science. Theology is the study of religion.  
 37. D  
 Evaluate, assess, and appraise are all synonyms; instruct does not mean the same thing.  
 38. C  
 Verbal classification would say: Defendant, prosecutor, and judge are all persons involved in a trial. A trial is not a person.  
 39. A  
 The heart, liver, and stomach are all organs

- of the body. The aorta is an artery, not an organ.
40. B  
The mayor, governor, and senator are all persons elected to government offices; the lawyer is not an elected official.
41. C  
42. A  
43. B  
44. D  
45. A  
46. B  
47. C  
48. C  
49. A  
50. C  
51. C  
52. D  
53. A  
54. B  
55. D  
56. C  
57. B  
58. D  
59. A  
60. B  
61. D  
62. B  
63. C  
64. A  
65. C  
66. D  
67. B  
68. A  
69. Mapped out; charted; calculated  
70. Noted; recorded; observed  
71. Brightened; lit up  
72. Space rock that orbits the sun mostly between Mars and Jupiter
73. Celestial body moving around the sun made of ice, dust, rock and gas
74. - the name of an asteroid scientists feared would hit Earth on 2-1-19
75. -500 to 1,000 yet to be discovered (they only know about 350 so far)
76. -one mile-wide  
-7 miles per second
77. *Students should note something similar to the following:*  
- it gives scientists time to know if an asteroid will hit the Earth and what to do about it  
-it gives time to determine best way to prevent collision  
- it gives time to try to destroy the asteroid  
- it gives time to evacuate areas of the planet where a crash may occur  
- it can help save many lives
78. *Students should note something similar to the following:*  
- study the orbit of asteroids near Earth  
-determine speed and direction of orbits for each asteroid  
-observe and record data on each one (size, where it is headed, etc.)  
-search the sky for unknown asteroids  
-determine how to prevent/avoid collisions with Earth (lasers)
79. B  
80. A  
81. B  
82. C  
83. C  
84. B  
85. C  
86. A  
87. C  
88. B  
89. D  
90. A