Spring Prep for GT7, 2020 Issue 6 (Zoom)

Name:_____ School : _____

Age has a funny way of causing changes. It is probably easy for you to look back and see that you and your friends have made some major changes since you left the elementary grades. Your teachers and friends may be different, your school may be different, and some of your interests are probably different. Think back to fourth grade and describe how school, and life, has changed for you as a student in your current grade.	Thesis Strength, Arguments, Supporting Areas	
	Evidence/Details	
	Reinforcement of Thesis	
	Mechanics/Diction/Grammar	
	Organization/Flow	
	Total	

CogAT Verbal

March 27, 2020

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Name: (First)_____(Last)_____

School: _____ Grade:_____

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Sentence Completion

Select the best match to complete each of the following sentences.

1. The emperor Mansa Musa is known bringing _____ caravan of tens of thousands of servants and many tons of gold along with him on a religious pilgrimage.
   (A) a lavish
   (B) a sparse
   (C) an insufficient
   (D) an austere

2. The Nazi Party _____ the idea that the Jews were causing all of Germany's problems. The Nazis carried out a terrible _____ in an attempt to wipe out the Jewish population.
   (A) espoused ... genocide
   (B) challenged ... war
   (C) asserted ... campaign
   (D) abhorred ... Holocaust

3. The _____ cost of golf makes it a sport of the upper classes; many people cannot pay the price of the equipment, attire, and club membership fees.
   (A) reasonable
   (B) inexpensive
   (C) modest
   (D) prohibitive

4. Agnostics consider questions of divinity to be _____, claiming that it is impossible to know whether or not God exists.
   (A) straightforward
   (B) imponderable
   (C) forthright
   (D) conspicuous

5. Because of the professor's reputation for being _____, the students in her class were surprised by her _____ in the first lecture of the semester.
   (A) garrulous ... bombast
   (B) pithy ... terseness
   (C) succinct ... congeniality
   (D) loquacious ... brevity

6. Nearly every ancient culture had a myth involving a trickster character, a _____ individual who creates mischief either through cunningness or foolishness.
   (A) waggish
   (B) venerable
   (C) stoic
   (D) portly

7. The hall of fame committee was nearly unanimous in _____ the star athlete; only one voter _____ and did not support the athlete's induction.
   (A) dismissing ... saluted
   (B) praising ... duped
   (C) lauding ... dissented
   (D) reprimanding ... abstained

8. The repair shop attempted to _____ the damaged automobile but ultimately decided it was irreparable.
   (A) sabotage
   (B) sap
   (C) salvage
   (D) retain

9. Far more than being merely _____, the titular character in Herman Melville's The Confidence-Man appears to be downright _____; most contemporary scholars assume he is a fill-in for the devil.
   (A) villainous ... evil
   (B) restive ... furtive
   (C) decorous ... misanthropic
   (D) nefarious ... indecent

10. The author's first novel had such a _____ story that critics quickly dismissed the author as a _____.
(A) hackneyed ... professional
(B) suspenseful ... poseur
(C) transparent ... scamp
(D) trite ... hack

11. The governor and his entourage traveled to the best restaurant in Seattle because they wanted to eat food prepared by the state's _____ chef.
(A) abominable
(B) preeminent
(C) potable
(D) monastic

12. Upon being cited for speeding, the driver became _____ and took out his anger by smashing a CD case on his dashboard.
(A) allayed
(B) depraved
(C) hypercritical
(D) irate

13. In the 1970s, gas prices rose drastically because of _____ of oil entering the marketplace; as with any commodity, gas prices are impacted by the basic laws of supply and demand.
(A) a zenith
(B) a glut
(C) a graft
(D) a modicum

14. Much of Moliére's work was satirical in nature; in Tartuffe, for instance, he _____ much of French high society, including church leaders.
(A) admonishes
(B) lampoons
(C) immortalizes
(D) lionizes

15. The coach was dismayed to find that his team was unable to get past its _____ start; rather than being _____ in the second half, the team remained lethargic throughout.
(A) slipshod ... enumerated
(B) slow ... enervated
(C) slapdash ... endured
(D) sluggish ... energized

16. In On the Road, Jack Kerouac documented the _____ lifestyle he and other members of the Beat generation practiced; rather than settle down in one place, many of them would move around from coast to coast.
(A) transient
(B) myopic
(C) pedestrian
(D) untenable

17. One of the most effective ways to resolve conflict is to seek an outside mediator, someone who can hear both sides of the argument and attempt to _____ the angered parties.
(A) inflame
(B) pacify
(C) outwit
(D) bolster

18. Once the District Attorney convinced the _____ star witness to testify, her once _____ case suddenly appeared more than sufficient.
(A) obsolete ... scanty
(B) ruthless ... sanguine
(C) duplicitous ... illusory
(D) reluctant ... flimsy

19. Holmes was instantly _____ upon meeting the victim's widow; there was something about her he just did not trust.
(A) credulous
(B) leery
(C) bamboozled
(D) soothed

20. _____ spending habits caused the rock star to squander most of his fortune, so that later in life he had to be something of a _____ and pinch every penny of every paltry royalty check he received.
(A) sagacious ... wastrel
(B) profligate ... miser
(C) egregious ... spendthrift
(D) reckless ... scapegoat

Analogies

Select the best match for each of the following analogies.

21. aural : audible =
    A) visual : visible
    B) vision : visible
    C) visual : visit
    D) visible : visual

22. cheese : milk =
    A) wheat : grain
    B) bread : crust
    C) jam : fruit
    D) cookie : crumb

23. donor : gift =
    A) zealot : detachment
    B) advisee : counsel
    C) braggart : attention
    D) prophet : prediction

24. fleeting : duration =
    A) grim : manner
    B) concise : length
    C) glancing : distance
    D) rapid : leisure

25. hierarchy : ranked =
    A) infinity : fixed
    B) chronology : sequential
    C) equation : solved
    D) critique : biased

26. laudable : praise =
    A) fragile : stability
    B) contemptible : scorn
    C) imperturbable : agitation
    D) enamored : love

27. obstinate : mulish =
    A) coy : kittenish
    B) gruff : doglike
    C) inanimate : beastly
    D) clever : dull

28. radiance : glimmer =
    A) sparkle : glitter
    B) dark : light
    C) heat waves : shimmer
    D) midday : dawn

29. skirmish : battle =
    A) detour : road
    B) ambush : retreat
    C) injury : scar
    D) quiz : examination

30. trough : pigs =
    A) flock : sheep
    B) manger : cattle
    C) den : bears
    D) carton : eggs

31. autumn : wither =
    A) fall : digress
    B) season : change
    C) winter : retreat
    D) spring : flower

32. choreographer : dance =
    A) director : film
    B) driver : automobile
    C) calligrapher : pen
    D) astrologer : stars

33. door : latch =
    A) wall : plaster
    B) necklace : clasp
    C) window : pane
    D) lock : key

34. flimsy : strength =
    A) wary : caution
    B) hazardous : danger
    C) slippery : smoothness
    D) clumsy : grace

35. hive : bee =
    A) zoo : cage
    B) writer : books
    C) letter : file
    D) den : bear

36. laurel : victory =
    A) black cat : defeat
    B) olive branch : peace
    C) lantern : caution
    D) fig leaf : license

37. odometer : distance =
    A) audiometer : sound
    B) meter : foot
    C) barometer : atmospheric pressure
    D) compass : direction

38. rafters : wood =
    A) cart : harness
    B) garden : manure
    C) hole : peg
    D) walk : cement

39. skullduggery : swindler =
    A) surgery : quack
    B) forgery : speculator
    C) chicanery : trickster
    D) quandary : craven

40. turncoat : vilify =
    A) pickpocket : describe
    B) author : confound
    C) adviser : confirm
    D) viper : slay

Vocab for GT Middle School

Word Bank:

coincidence	pursuing
diversity	radiating
legibly	reversal
narrator	ridiculous
notable	shiny

41. _____ a dream, Robert Scott set off for the South Pole.

42. Critics branded his quest _____, but he ignored them.

43. He met each new _____ with courage.

44. He recorded each day's struggles _____ in his journal.

45. Scott was the final _____ of his own tragic tale.

46. Every August thousands of _____ meteor trails streak the night sky.

47. The Perseid meteor showers are a _____ summer event.

48. Meteors sometimes show surprising color _____, ranging from red and orange to gold and green.

49. The term Perseid refers to the constellation Perseus, from which the meteors appear to be _____.

50. In fact, this appearance is only a _____. The falling stars are really part of the tail of a comet that orbits the sun.

Word Bank:

absolutely	enforcement
agreeable	manageable
awareness	noticeable
courageous	purposeful
defenseless	woeful

51. In *Where the Red Fern Grows*, a _____ boy works hard to buy two puppies.

52. He finds caring for them difficult, but _____.

53. If he leaves them, they begin a _____ howling.

54. The smaller puppy has a gentle, _____ nature.

55. Both dogs prove _____ when a mountain lion attacks.

56. Manatees—sometimes called the clowns of the ocean—are among the most _____ of sea mammals.

57. Bulky and slow-moving, many have _____ no fear of humans. As a result, manatees are often injured by power boats and jet skis.

58. A _____ drop in the number of manatees has also been caused by a loss of habitat.

59. Wildlife experts hope to raise public _____ of manatees' plight.

60. These experts feel that new laws and careful _____ can save these endangered animals.

Vocab for GT Middle School

Word Bank:

coexist	conform
collaborate	congregate
companion	consolidate
compensate	conspicuous
composition	contemplate

61. friend or associate (com panis, "bread")
62. to gather in a group (con gregis, "herds")
63. to pay; to make up for (com pensare, "to balance")
64. to unite or strengthen (con solidus, "firm")
65. easily seen (con specere, "to look")
66. A century ago an ancient clay disk was unearthed in Crete. Today scientists still _____ its mystery.
67. Forty-five characters stamped on the disk form "phrases." Scholars _____ on deciphering the phrases, but none have yet succeeded.
68. The characters _____ to no single culture.
69. What can this four-thousand-year-old _____ tell us?
70. Did several cultures _____ in ancient Crete? So far, no one knows.

Word Bank:

biathlon	triangular
bicentennial	triathlon
binary	trilogy
monarchy	unison
monotonous	universal

71. _____: two-hundred-year event
72. _____: system with two parts
73. _____: with three angles
74. _____: through one whole system; general
75. _____: set of three novels
76. _____: rule by one king
77. _____: sounding or acting as one
78. _____: two-part athletic contest
79. _____: three-part athletic contest
80. _____: with only one tone; boring
81. Our state marked its _____ with a huge celebration.
82. People wore _____ hats like the early colonists.
83. For the _____, athletes competed in swimming and running.
84. The _____ included cycling and two other events.
85. In a _____ number system, two hundred would be written as 11001000.
86. J. R. R. Tolkien's Lord of the Rings is a timeless _____ with _____ appeal.
87. In this adventure tale, heroes undertake a quest across rugged mountains and _____ wastelands.
88. They pass through various countries, with governments that range from _____ to anarchy.
89. In times of despair, the characters sing or chant in _____.

Vocab for GT Middle School

Word Bank:

Admission	Futile	Petal
Affect	Illusion	Provoke
Allusion	Infer	Reference
Commit	Inscribe	Scribble
Dissent	Manuscript	Stationary
Dissent	Omission	Vocation
Effect	Pedal	

Read the "terse verse" rhymes below.

90. Festival Honoring Careers: _____ Celebration

91. Drool on The Toddler's Drawing: Dribble on the _____

92. Promise to Remain Seated: _____ To Sit

93. Ineffective French Dog: _____ Poodle

94. Examine the Result: Inspect The _____

95. Misunderstanding About A Mirage: _____ Confusion

96. Choose to Make an Insightful Guess: Prefer To _____

97. Forgotten Gear Shift: Transmission _____

98. Create A Way Down: Invent A _____

99. A Lot of Hints: _____ Profusion

100. Entry Fee: _____ Commission

101. Flower Part in The Teapot: _____ In the Kettle

102. Annoy with Incense: _____ With Smoke

103. Engrave Words for The Ethnic Group: _____ For the Tribe

104. Favorite Encyclopedia: _____ Preference

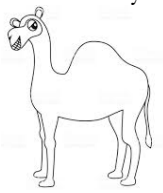
105. Torn Rough Draft: Ripped _____

106. Influence the Accent: _____ The Dialect

107. To Regret That You Disagreed: To Repent Your _____

108. Participate in A Bike Race: _____ For a Medal

109. Camel Standing Still: _____ Dromedary



Vocab for GT Middle School

Word Bank:

cliffs	plaintiffs
fiefs	reproofs
halves	serfs
leaves	thieves
lives	yourselves

110. _____ cliff

111. _____ fief

112. _____ half

113. _____ leaf

114. _____ reproof

115. _____ life

116. _____ serf

117. _____ thief

118. _____ yourself

119. _____ plaintiff

Word group

120. _____ attorneys, judges, juries

121. _____ fourths, thirds, wholes

122. _____ ourselves, themselves, himself

123. _____ rock walls, bluffs, crags

124. _____ foliage, fronds, vegetation

125. In medieval Europe, feudal lords owned vast estates called _____.

126. Peasants and _____ worked the land for the lords, delivering much of every crop to the great manor houses.

127. Peasants' _____ were harsh, but there were benefits.

128. Knights protected the peasants from _____ and other dangers lurking in the nearby forests.

129. Knights also kept order, delivering stern _____ to anyone who broke the law.

Answer Key

Sentence Completion

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

Analogies

21. A
22. C

made from (source)

Cheese is made from milk.

Jam is made from fruit.

23. D

"offers"

24. B

< (small part)

25. B

net-wire

A hierarchy is ordered by ranking.

A chronology is ordered by sequential dates.

26. B
27. A
28. D
29. D
30. B
31. D
32. A
33. B

function

34. D

lacking

35. D
36. B
37. C
38. D
39. C
40. D

Vocab for GT Middle School

41. Pursuing
42. ridiculous
43. reversal
44. legibly
45. narrator
46. shiny
47. notable
48. diversity
49. radiating
50. coincidence
51. purposeful
52. manageable
53. woeful
54. agreeable
55. courageous
56. defenseless
57. absolutely
58. noticeable
59. awareness
60. enforcement

Vocab for GT Middle School

61. companion
62. congregate
63. compensate
64. consolidate
65. conspicuous
66. contemplate
67. collaborate
68. conform
69. composition
70. coexist
71. bicentennial
72. binary
73. triangular
74. universal
75. trilogy
76. monarchy
77. unison
78. biathlon
79. triathlon
80. monotonous
81. bicentennial
82. triangular
83. biathlon
84. triathlon
85. binary
86. trilogy, universal
87. monotonous
88. monarchy
89. unison

Vocab for GT Middle School

90. Vocation
91. Scribble
92. Commit
93. Futile
94. Effect
95. Illusion
96. Infer
97. Omission
98. Dissent
99. Allusion
100. Admission
101. Petal

102. Provoke
103. Inscribe
104. Reference
105. Manuscript
106. Affect
107. Dissent
108. Pedal
109. Stationary

Vocab for GT Middle School

110. cliffs
111. fiefs
112. halves
113. leaves
114. reproofs
115. lives
116. serfs
117. thieves
118. yourselves
119. plaintiffs
120. plaintiffs
121. halves
122. yourselves
123. cliffs
124. leaves
125. fiefs
126. serfs
127. lives
128. thieves
129. reproofs

Math Power

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Name: (First)_____(Last)_____

School: _____ Grade:_____

CRUNCHING NUMBERS 2
SQUARES 3
GT INTEGRATED REVIEW 4
GT MATH CONTEST 6

Crunching Numbers

1. (-1)×(-2) + (-3)×(-4) + (-6) =

2. $\frac{-5}{12} \times -\frac{4}{5} \times -\frac{3}{7} =$

3. .045 ÷ 9000 =

4. .24 ÷ 4000 =

5. _____ min = 0.35 hr

6. 0.78 ÷ 200 =

7. 100 min = _____ hr (in mixed number)

8. 160 ÷ .2 =

9. 2.55 ÷ 0.85 =

10. 2000 × 4000 =

11. 26 is what percent of 20?

12. 30 × 200 =

13. 350 ÷ 5 =

14. 40 min = _____ hr (in fractions)

15. 5 + Δ = 0, Δ =?

16. 6 × 2 × 7 =

17. $7 \times 2 - 3^2 + 8 =$

18. 72 is what percent of 90?

19. $81.4 \div 0.74 =$

20. $9^2 + 0.5 \times 2^4 - 0.7 =$

21. Find all the factors of 140.

22. Find the value of Δ below:
$\frac{3}{2} = \frac{9}{\Delta}$

Squares

23. $25^2 - 11^2 =$

24. $0.23^2 =$

25. $22^2 - 12^2 =$

26. $2300^2 =$

27. $0.17^2 =$

28. $0.21^2 =$

29. $1.4^2 + 2.4^2 =$

30. $2400^2 =$

31. $2500^2 =$

32. 240^2 =

33. $1.8^2 - 1.1^2$ =

34. $1.3^2 - 1.2^2$ =

35. $1.1^2 + 2.5^2$ =

36. $160^2 - 110^2$ =

37. 250^2 =

38. 1100^2 =

39. $120^2 + 120^2$ =

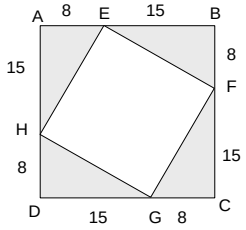
40. 0.14^2 =

41. $2.5^2 - 1.3^2$ =

42. 1200^2 =

GT Integrated Review

43. Both □ABCD and □EFGH are squares in the figure below. Find the area of □EFGH.



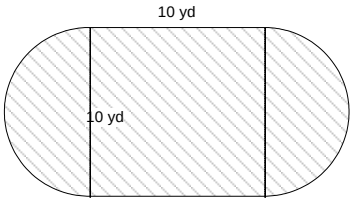
(Hint: Find the area of ΔAEH.)

44. $3x + 1 = 25 - x$

45. -7×-8×-2=

46. .025 × 50 =

47. In Great Botanic Garden, a pond is formed by connecting two semicircles and the central square. Based on the figure below, what is the length in yards of the longest bridge that can be built across the pond?



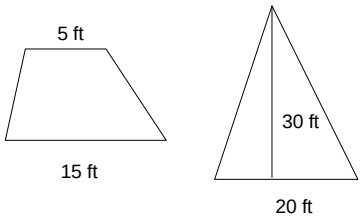
48. Write down the prime factors of 91.

49. $2\frac{2}{3} \times 3\frac{3}{4}$ =

50. 7 - {(-4 - 5) - 6 + 10} =

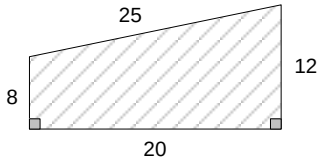
51. 105 min = _____ hour (in fractions)

52. If the areas of the trapezoid and the triangle are the same, what is the height?



53. $1\frac{3}{7} \times 2\frac{4}{5}$=

54. Find the shaded area.



55. Find the least common denominator Add or subtract and rename the resultant fraction appropriately. Reduce it to the lowest terms.

$$\begin{array}{r} 6\frac{1}{4} \\ -\ 3\frac{5}{6} \\ \hline \end{array}$$

56. How many minutes are there in a week?

57. What is the greatest common factor of 168 and 312?

58. $54\times 2\frac{1}{9} =$

59. What is the smallest prime number?

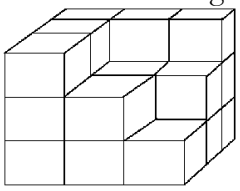
60. $2\times 4^3 + 6 - 2 =$

61. $200 \times 2800 = 5.6 \times 10^a$
$a =$

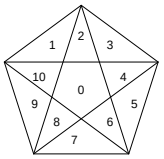
62. If a car can travel 105 mi on $3\frac{1}{2}$ gal of gas, and a van can travel 70 mi on $2\frac{1}{2}$ gal, which vehicle uses less gas?

GT Math Contest

63. How many unit cubes are needed to build this solid figure?



64. If every vertex of a regular pentagon is connected to every other vertex, how many triangles are formed?



65. Of 30 students, two-tenths got As. How many got As?

66. $1 + 1\times 1 + 1\times 2\times 1 + 1\times 1 + 1 =$

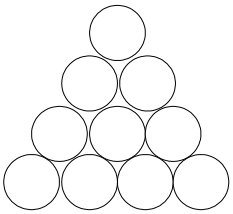
67. If Jane is older than Kim, Kim is older than Shawn. Shawn is younger than Jane and Rachel is older than Jane
List the people from oldest to youngest.

68. The area of a circle is the same as the area of a square whose side is 4 centimeters. The radius of the circle is closest to:
A) 16.25 centimeters
B) 5.25 centimeters
C) 4.25 centimeters
D) 2.25 centimeters

69. Mother bear is making her 5 bear cubs new coats. The coats have 3 buttons each. How many buttons does Mother bear need?

70. A cube of cheese is 4 cm wide, 4 cm long and 4 cm high. Six faces of the cube are covered with thin layer of wax. The cheese is then cut into 64 small cubes with sides of length 1 cm. How many of these small cubes have no wax on them?

71. A 4-row wine rack is shown in the diagram. Each circle represents a hollow cylinder that can hold one bottle of wine. How many bottles can be stored in a similar 10-row wine rack?



72. Fresh grapes are 90% water, but, raisins (sun-dried grapes) are only 40% water. How much fresh grapes (in kg) is needed to make 5 kg of raisins?

73. A trucker paid \$35 to fill the tank when her gas tank was $\frac{1}{8}$ full. How much did she need to pay to fill the tank when was only $\frac{3}{4}$ full?

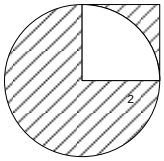
74. $100\times(70\times50)$ =
A) 7000×5000
B) 700×5000
C) 700×500
D) 7000×500

75. One third of 77 is the same as one sixth of what number?

76. The number 88 is what fractional part of 888?
A) $\frac{1}{8}$
B) $\frac{1}{11}$
C) $\frac{11}{111}$
D) $\frac{1}{800}$

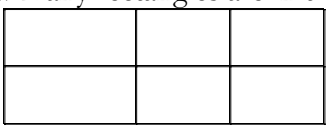
77. There are 2 pirates and 4 treasure chests on an island. The pirates have 1 small boat to take the treasure to their ship. The boat can take 2 pirates or 1 pirate and 1 chest of treasure. How many one way trips do the pirates have to take to get all the treasure and both pirates onto the ship?

78. As shown, a vertex of a square with sides of length 2, and the center of a circle with a radius of 2, coincide. What is the area of the shaded region?



A) $4\pi - 4$
B) $2\pi + 4$
C) $3\pi - 4$
D) π

79. How many rectangles are in this figure?



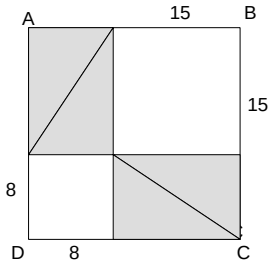
80. A taxi driver charges \$3 once you get in the car. Then he charges you \$2 for each mile you travel. How far can you go if you have just \$23?

81. How many 4-digit whole numbers greater than 2003 have 2 as their thousands digit and 1 as their ones digit?

82. Find the seventh term in the following sequence: 0 , 2, 5, 9, 14, …

Answer Key

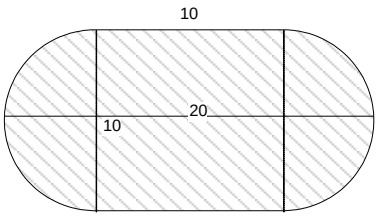
1. 8
2. -⅐
3. .000005
4. .00006
5. 21
6. 0.0039
7. $1\frac{2}{3}$
8. 800
9. 3
10. 8000000
11. 26÷20 = 1.30 = 130%
12. 6,000
13. 70
14. $\frac{2}{3}$
15. -5
16. 84
17. 13
18. 80%
19. 110
20. 88.3
21. {1, 2, 4, 5, 7, 10, 14, 20, 28, 35, 70, 140}
22. Δ = 6
23. 504
24. 0.0529
25. 340
26. 5290000
27. 0.0289
28. 0.0441
29. 7.72
30. 5760000
31. 6250000
32. 57600
33. 2.03
34. 0.25
35. 7.46
36. 13500
37. 62500
38. 1210000
39. 28800
40. 0.0196
41. 4.56
42. 1440000
43. Method I)



Merge the triangles to form two rectangles as the above. The remaining region is left with two separate squares. The combined area is $8^2 + 15^2 = \boxed{289}$.

Method II)
area(□ABCD) = $23^2 = 529$
area(ΔAEH) = $\frac{1}{2}(8)(15) = 60$
529 - 4×60 = 289

44. 6
45. -112
46. 1.25
47. 20 yd



48. 7 and 13 as 91=7×13
49. $\frac{8}{3} \times \frac{15}{4} = 10$
50. 12
51. 105 min = 1 hr and 45 min = $1\frac{3}{4}$ hr
52. 30 ft
53. 4
54. (8+12)×20÷2 = 200
55. $2\frac{5}{12}$
56. 24×60 = 1440 min
    1440×7 = 10080 min
57. 168 = 24×7
    312 = 24×13
    GCD = 24

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58. $54\times2 = 108$
$54\times\frac{1}{9} = 6$
$108 + 6 = 114$

59. 2

60. 132

61. $200\times2800 = 560000 = 5.6\times10^5$

62. On a gal of gas, the car can travel 30 mi, while the van can travel 28 mi. So, the car can save more.

63. $3\times3\times3 - 5 = 22$ cubes

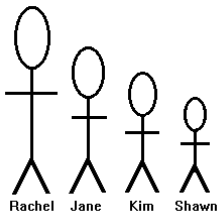
64. 1|2|3|4|5|6|7|8|9|10 = 10 triangles
(12, 23)×5 = 10 triangles
(206,208)×5 ÷2 = 5
(123)×5 = 5 triangles
(2,0,6,7,8)×5 = 5 triangles

10 + 10 + 5 + 5 + 5 = 35 triangles

65. $0.2\times30 = 6$

66. $1 + 1\times1 + 1\times2\times1 + 1\times1 + 1$
$= 1 + 1 + 2 + 1 + 1$
$= 6$

67. Rachel, Jane, Kim, and Shawn.



68. D
$r^2\pi = 4^2$
$r = \sqrt{\frac{16}{\pi}} = 2.25$

69. $3\times5 = 15$ buttons

70. $4 - 2 = 2$
$2\times2\times2 = 8$ cubes

71. $1 + 2 + 3 + \ldots + 10 = 55$

72. Method I)
6 units of grape can produce 1 unit of raisin.
$5\times6 = 30$ kg

	Pulp	Water
Grape	0.1	0.9
Raisin	0.6	0.4

Method II)
1 - 40% = 0.6 (totally dehydrated)
$5\times0.6 = 3$ kg (pure raisins without water)
$\square\times0.1 = 3$
$\square = 3\div0.1 = 30$ kg (fresh grapes)

73. $1 - \frac{1}{8} = \frac{7}{8}$
$1 - \frac{3}{4} = \frac{1}{4}$
$35\times\frac{\frac{1}{4}}{\frac{7}{8}} = 35\times\frac{2}{7} = 5\times2 = \$10.00$

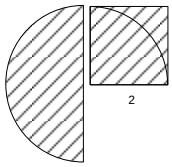
74. C

75. $\frac{1}{3} = \mathbf{2}\times\frac{1}{6}$
$77\times\mathbf{2} = 154$

76. C

77. $4\times2 + 1$ (pirate) = 9 trips
See the details below.
- 2 pirates go to ship
- 1 pirate returns for treasure
- Pirate takes 1 treasure chest to ship
- Returns to island
- Takes 2nd treasure chest to ship
- Returns to island
- Takes 3rd treasure chest to ship
- Returns to island
- Takes last treasure chest to ship

78. B
$3\pi + (4 - \pi) = 2\pi + 4$
or
Move a quarter of the circle to fill the square as below. The area is
half-circle + square = $\frac{1}{2}(4\pi) + 4 = 2\pi + 4$.



79. $6\times3 = 18$ rectangles

80. $23 - 3 = 20$
$20\div2 = 10$ mi

81. $2\square\square1$
Each $\square$ can have 10 digits: 0 to 9.
$10\times10 = 100$
There is only one (2001) smaller than 2003.
$100 - 1 = 99$

82. $14 + 6 = 20$
$20 + 7 = 27$