

1) Eleven girls are standing around a circle. A ball is thrown clockwise around the circle. The first girl, Amy, starts with the ball, skips the next three girls and throws to the fifth girl, who then skips the next three girls and throws the ball to the ninth girl. If the throwing pattern continues, including Amy's initial throw, how many total throws are necessary for the ball to return to Amy? (1) *2004-WU1-3*

2) Five aluminum cans can be recycled to make a new can. How many new cans can eventually be made from 125 aluminum cans? (Remember that the first new cans that are made can then be recycled into even newer cans). (1) *2004-WU1-8*

3) I am 13 years old, and my coach is 31 years old, which is my age with the digits reversed. What is the fewest number of years in which the digits of our ages will be reversed again? (1) *2004-WU1-9*

4) How many times does the digit 6 appear in the list of all integers from 1 - 100? (1) *2004-WU1-10*

5) On Mike's 8th birthday, in 2004, his father said, "my age is now four times your age". In what year will his father be able to say, "my age is now three times your age"? (1) *2004-WO1-5*

6) Today, Darron's teacher pairs each student with a partner to create exactly 12 pairs of students. Next week each student will be paired with a different partner. Darron's partner for next week can only be chosen from how many students? (1) *2004-WU4-1*

7) Jen has created this rule for generating sequences of whole numbers:

If a number is 15 or less, triple the number.

If a number is more than 15, subtract 13 from it.

If the first number in Jen's sequence is 34, what is the 8th number in the sequence? (1) *2004-WU4-2*

8) What is the fewest number of perfect squares that can be added together for a sum of 49? (1) *2004-WO3-3*

9) How many different combinations of 3-cent and 4-cent stamps could a person use to put exactly 37 cents of postage on a letter? (1) *2004-WU7-8*

10) Zack has one quarter, two nickels and three pennies. Assuming no items are free, for how many different priced items does Zack have exact change? (1) 2004-WU8-6

11) What is the value of y in the arithmetic sequence $y + 6, 12, y$? (2) 2004-WU9-1

12) Nine ping-pong balls are numbered 1 through 9. How many different combinations of three balls have a sum of 16? (1) 2004-WU10-1

13) What is the smallest positive five-digit integer, with all different digits, that is divisible by each of its non-zero digits? (1) 2004-WU10-5

14) The length of each side of an isosceles triangle is a prime number. The perimeter of the triangle is greater than 21 units and is not a prime number. What is the least possible perimeter of the triangle? (1) 2004-WU11-2

15) An abundant number is a positive integer such that the sum of its proper divisors is greater than the number itself. The number 12 is an abundant number since $1 + 2 + 3 + 4 + 6 > 12$. What is the smallest abundant number that is not a multiple of 6? (1) 2004-WU11-6

16) The letters P, Q, R, S and T have replaced digits in the equation $P4Q + 2R5 = S1T$. Given that each digit 1 through 9 is used exactly once in the equation, which digit must Q represent? (1) 2004-WO6-1

17) The positive four-digit integers that use each of the four digits 1, 2, 3 and 4 exactly once are ordered from least to greatest. What is the 15th integer on the list? (1) 2004-WO6-2

18) Ten cards are numbered 1 - 10 and lying face up in a row. David turns over every card that is a multiple of 2. Then he turns over every card that is a multiple of 3, even if the card has been turned over previously and is currently face down. He continues this process with the multiples of 4 through 9. How many cards are then face up? (2) 2004-WU14-1

19) On a number line, point M is the midpoint of segment AB. The coordinates of A and M are -2 and 7 respectively. What is the coordinate of point B? (1) 2004-WU16-1

- 20) Suppose x and y are two distinct two-digit positive integers such that y is the reverse of x . (For example $x = 12$ and $y = 21$ is one such combination). How many different sums of $x + y$ are possible? (1) 2004-WU16-7
- 21) In how many ways can 81 be written as the sum of three positive perfect squares if the order of the three perfect squares does not matter? (1) 2004-WU18-8
- 22) What is the units digit of 2^{48} ? (1) 1999-WU1-7
- 23) For how many positive integers n will $\frac{60}{n}$ also be an integer? (1) 1999-WU3-2
- 24) What is the least whole number that is divisible by 7, but leaves a remainder of 1 when divided by any integer 2 through 6? (1) 1999-WU4-6
- 25) The first term of an arithmetic sequence is 15, and the 7th term is 57. What is the third term of the sequence? (1) 1999-WU4-4
- 26) What is the least possible positive integer with exactly five distinct positive factors? (1) 1999-WU6-9
- 27) A digital 12-hour clock shows hours and minutes. During what fraction of the day will the clock show the digit 1 in its display? (1) 1999-WU6-10
- 28) For what value of n is the four-digit number 712 n , with unit's digit n , divisible by 18? (1) 1999-WU7-4
- 29) In a sequence, each term is obtained by calculating the sum of the preceding two terms. The eighth term is 81, and the sixth term is 31. What is the fourth term? (1) 1999-WU9-6
- 30) What is the fifth term in a geometric sequence if the first term is 625 and the eighth term is $\frac{1}{125}$. (1) 1999-WU12-6
- 31) What is the positive difference between the sum of the first 100 positive odd integers and the sum of the first 100 positive even integers? 1999-WU13-8
- 32) What is the remainder when $13^{13} + 5$ is divided by 6? (1) 1999-WU13-10

- 33) What is the least positive integer divisible by each of the first five composite numbers? (1) 1999-WU15-4
- 34) What is the greatest prime factor of $55^{11} + 55^{101} + 55^{102}$? (3) 1999-WU15-5
- 35) The 26 letters of the alphabet are assigned prime number values in consecutive order beginning with 2. The product of the values of the letters of a common math term is 595,034. What is the term? (3) 1999-WU16-10
- 36) What is the units digit of the sum $3^{86} + 7^{68}$? (2) 1999-WU17-10
- 37) The three-digit base six number nmn_6 , is equal to the product of 23_4 and 34_5 . What digit is represented by n ? (1) 1999-WU18-8
- 38) How many positive integer factors does 2000 have? (3) 1999-WO1-5
- 39) What is the 4037th digit following the decimal point in the expansion of $\frac{1}{17}$? (1) 1999-WO1-9
- 40) What is one-fourth of the sum of the first 11 prime numbers? (1) 1999-WO2-8
- 41) The product of the least common multiple and the greatest common factor of 22 and 48? (1) 1999-WU2-9
- 42) What is the least integer value of m such that $3^m + 2^m$ is a three-digit number? (1) 1999-WO3-8
- 43) In how many zeros does $\frac{20!}{4(5!)}$ end? (2) 1999-WO4-7
- 44) One trillion is 10^n times one-trillionth. What is the value of n ? (1) 1999-WO5-7
- 45) On a circular dartboard with concentric scoring areas, it is possible to score 15, 16, 17, 18 or 19 points with one dart. What is the fewest number of darts necessary to score exactly 100 points on this dartboard? (1) 1999-WO7-9

46) The first term of a geometric sequence is 7, and the 7th term is 5103. What is the 5th term? (2) 1999-WO9-3

47) What is the greatest possible product of a two-digit number and a three-digit number obtained from five distinct digits? (1) 1999-WO9-5

48) What is the smallest positive integer n such that $2n$ is a perfect square and $3n$ is a perfect cube? (2) 2000-WU1-5

49) A magic square is an array of numbers in which the sum of the numbers in each row, column and diagonal has the same value. In the given magic square, what is the product of the values of m , a , t and h ? (1) 2000-WU2-4

1	-6	m
-4	a	0
-3	t	h

50) Richard took the elevator to the 8th floor, then down 5 floors, up 10 floors, and finally down 1 floor. If those moves left Richard on the middle floor of the building, how many floors are in the building? (1) 2000-WU2-6

51) For how many pairs of positive integers is the sum less than 14? (1) 2000-WU3-6

52) Express the next term in the sequence as a decimal: 0, 0.5, $0.\overline{6}$, 0.75, ... (1) 2000-WU5-3

53) I am six years older than my sister. What was the number of years in my sister's age when I was three times as old as she was? (2) 2000-WU5-9

54) Ten days from Thursday, it will be Sunday. What day of the week will it be 1,000,000 days from Thursday? (2) 2000-WU6-3

55) What is the least positive integer with exactly 10 factors? (2) 2000-WU7-5

56) What is the remainder when 5^{30} is divided by 7? (3) 2000-WU8-1

57) What is the value of x for which $|3x + 5|$ is not positive? (2) 2000-WU8-6

58) Ten contestants numbered 1 - 10 stand in order around a circle. Beginning to count at 1, every 5th contestant will be eliminated until only one remains. What is the number of the last remaining contestant? (1) 2000-WU8-8

59) Set A contains all of the factors of 45, and set B contains all of the factors of 36. What is the product of the elements in $A \cap B$? 2000-WU8-10

60) If $[a]$ represents the greatest integer less than or equal to a , what is the value of $[\pi] + [-\pi]$? 2000-WU9-3

61) What is the sum of all positive integer values of n such that $\frac{n+18}{n}$ is an integer? (2) 2000-WU9-4

62) One year ago, Jane's age was a perfect square, and one year from now, her age will be a perfect cube. How old is Jane now? (1) 2000-WU10-5

63) Jerry is 6 inches taller than Kim, and Kim is 3 inches shorter than Tim. Jerry is 5 feet, 4 inches tall. How many inches tall is Tim? (1) 2000-WU10-8

64) What is the 453rd digit to the right of the decimal point in the decimal expansion of $\frac{6}{13}$? (2) 2000-WU11-4

65) Mike and John began biking from the same place on the same road, heading in the same direction. Each day, Mike biked 25 miles. John biked 5 miles the first day, 8 miles the second day, and so on, each day biking 3 miles more than he biked the previous day? If they began on July 1, on what day date did John pass Mike? (2) 2000-WU12-4

66) How many natural numbers greater than 6 but less than 60 are relatively prime to 15? (1) 2000-WU12-7

67) The first and seventh terms of a sequence are both 8? Each term of the sequence is the sum of the two previous terms. What is the fifth term? (2) 2000-WU13-2

- 68) The product of the first 101 positive integers is divided by the product of the first 100 positive integers. How many positive integer factors does the quotient have? (1) 2000-WU15-5
- 69) What is the greatest prime factor of 3105? (1) 2000-WO2-4
- 70) The function $f(n) = (1 + 2 + 3 + \dots + n) + 2n$ so that $f(2) = 7$ and $f(3) = 12$. What is $f(53)$? (3) 2000-WO3-6
- 71) When the positive integers with exactly three factors are listed in ascending order, what is the fifth number listed? (1) 2000-WO5-1
- 72) What is the units digit of $1! + 2! + 3! + 4! + \dots + 50!$? (2) 2000-WO6-3
- 73) Determine the number of digits in the value of $2^{12} \times 5^8$. (1) 2000-WO9-5
- 74) The number n is a prime number between 20 and 30. If you divide n by 8, the remainder is 5. What is the value of n ? (1) 2003-WU1-1
- 75) What fraction of the one-digit positive integers is prime? (1) 2003-WU1-10
- 76) A particular bacteria culture doubles in number every half-hour. There are 3328 bacteria at noon. How many bacteria were there at 8 a.m. earlier that day? (2) 2003-WO2-4
- 77) Two positive integers have a sum of 365. What is the smallest possible product they could have? (1) 2003-WU8-1
- 78) How many multiples of 9^3 are greater than 9^4 and less than 9^5 ? (3) 2003-WO6-2
- 79) How many positive perfect cube factors does $2^4 \times 3^6 \times 5^{10} \times 7^9$ have? (3) 2003-WU15-10
- 80) What is the least positive integer with exactly eight factors? (1) 2003-WU16-9
- 81) The square root of what number is double the value of 8? (1) 2002-WU2-1

82) A relatively prime day is one where the month number (e.g. January = 1, February = 2, etc.) and the date of the month (1, 2, ..., 31) have no common factor other than 1. Which month has the fewest relatively prime days? (1) 2002-WU4-8

83) Let $n = 2^4 \cdot 3^5 \cdot 4^6 \cdot 6^7$. How many natural number factors does n have? (3) 2002-WO2-10

84) What is the sum of all integer multiples of 3 between -118 and 128? (3) 2002-WU9-7

85) The natural number n has exactly two natural-number factors. How many natural-number factors does n^5 have? (3) 2002-WU12-5

86) Suppose a and b are different prime numbers greater than 2. How many whole-number divisors are there for the integer $a(2a + b) - 2a^2 + ab$? (3) 2002-WU13-7

87) Cards are numbered 1 to 100. One card is removed and the values on the other 99 are added. The resulting sum is a multiple of 77. What number was on the card that was removed? (3) 2002-WU13-8

88) What is the remainder when $10!$ is divided by 2^7 ? (2) 2002-WU14-6

89) The base six number 53_6 is equal to the base b number 113_b . What is the positive value of b ? (1) 2002-WO7-9

90) Suppose p and q are odd integers with $p < q$. How many even integers are there between them? Express the answer in terms of p and q . (2) 2002-WU15-10

91) How many of the natural-number factors of N when $N = 2^7 \cdot 3^{12} \cdot 5^7 \cdot 11^6$ are perfect cubes? (3) 2002-WU16-9

92) If N^3 is a divisor of $10!$, then what is the greatest possible integer value of N ? (2) 2002-WO9-6

93) What is the number of solutions to $1 < x < x^2$? (1) 1997-WU1-4

94) What percent of the whole numbers from 1 to 1000 inclusive are perfect squares? (1) 1997-WU2-2

95) What is the units digit of the product $3 \cdot 13 \cdot 23 \cdot 33 \cdot 43 \cdot 53 \cdot 63 \cdot 73 \cdot 83 \cdot 93$?
(2) 1997-WU4-6

96) What is the tenth number in the arithmetic sequence $3, x, 11, \dots$? (1) 1997-WU5-8

97) Pierre Fermat, a French mathematician who lived from 1601-1665, theorized that every prime number of the form $4n + 1$, for $n \geq 1$, is the sum of two squares in one and only one way. For instance, 13 can be written in the form $4(3) + 1$ and is equal to $9 + 4$. Two squares can be added to form the largest prime number less than 100 that can be written in the form $4n + 1$. What is the positive difference between these two squares? (2) 1997-WU8-6

98) How many whole numbers from 100 to 600 inclusive contain the digit 5 exactly once? (1) 1997-WU10-3

99) What is the least positive integer with exactly ten factors? (1) 1997-WU11-2

100) Select two different numbers from the set $\{4, 9, 12, 16, 18\}$. Of all possible pairs, what is the least possible value for the sum of the greatest common factor and least common multiple? (1) 1997-WU12-5

101) A positive integer less than 100 is a multiple of 3. Determine the probability that it also leaves a remainder of 1 when divided by 7. (1) 1997-WU12-10

102) In the following addition problem, each letter represents a digit. What is the value of $a + b + c + d$? (1) 1997-WU14-6

$$\begin{array}{r} a a a \\ + \quad b \\ \hline c d d c \end{array}$$

103) What is the least integer $n \geq 2$ such that 2^n is a composite number? (1) 1997-WU14-7

104) The least common multiple of two numbers is 3780, and the greatest common factor is 18. Given that one of the numbers is 180, what is the other number? (1) 1997-WU17-2

105) What is the sum of all positive two-digit integers with exactly five positive integral factors? (1) 1997-WU17-5

106) Find the sum of all positive integral values of n for which $\frac{n+6}{n}$ is an integer. (1) 1997-WO2-9

107) $x = \text{LCM}(12, n)$ where n is an element of $\{2, 4, 6, 8, 10, 12\}$. What is the greatest possible value of x ? (1) 1997-WO4-5

108) Find the units digit of 7^{28} . (1) 1997-WO6-2

109) Find the remainder when 23^{19} is divided by 10. (1) 1997-WO8-9

110) Find the least possible integer m for which $1260m$ is a perfect square. (2) 1997-WO9-2

111) Determine the number of digits in the number $n = 2^{12} \cdot 5^8$. (2) 1997-WO9-4

112) In the base y number system $4 \times 6 = 30$, and $4 \times 7 = 34$. What is the value of $4 \times 5 \times 7$ expressed in this number system? (2) 1997-WO9-10

113) What is the smallest positive integer that has 8, 30 and 54 as factors? (1) 2001-WU3-10

114) How many factors of 1800 are multiples of 10? (1) 2001-WU4-4

115) Let $a*b$ = the least common multiple of a and b . What is the sum of all natural number values of x such that $15 * x = 45$? (2) 2001-WU7-7

116) Let p and q be different prime numbers. How many positive factors will $(p^2q^4)^3$ have? (2) 2001-WU7-8

117) What is the units digit of $6^{10} \cdot 5^{12}$? (2) 2001-WU8-6

118) The variables c, d, e and f represent distinct digits in this correctly worked multiplication problem. What is the value of $c + d + e + f$? (2) 2001-WU10-4

$$\begin{array}{r}
 3c \\
 \times d5 \\
 \hline
 195 \\
 1e6 \\
 \hline
 1f55
 \end{array}$$

119) Use each of the digits 2, 3, 4, 6, 7 and 8 exactly once to construct two three-digit integers M and N so that $M - N$ is positive and is small as possible. Compute $M - N$. (1) 2001-WU11-9

120) The five-digit number $4a,ab7$ is divisible by nine where a and b are single digit whole numbers. How many possible combinations are there for a and b ? (1) 2001-WU12-4

121) Two years ago the ages of an oak tree and that of a younger oak tree were both perfect squares. Two years from now both of their ages will be perfect cubes. What is the sum of the current ages of the two oak trees? (1) 2001-WU8-6

122) The product of the digits of a four-digit number is $6!$. What is the smallest possible value of this number? (2) 2001-WU13-6

123) What is the largest value of n for which 2^n is a factor of $10!$? (2) 2001-WU14-2

124) P and Q are positive prime numbers with $P < Q$ and $P + Q = 124$. What is the smallest possible value of $P - Q$? (1) 2001-WU15-4

125) Each term in a sequence is the sum of the previous two terms. If the sequence contains the terms $a, b, c, 12, 19$ and 31 , in that order, what is the value of a ? (1) 2001-WU17-5

126) What is the least whole number n such that 84 is a factor of $n!$? (2) 2001-WU17-8

127) The sum of 40 consecutive integers is 100. What is the largest of these 40 integers? (2) 2001-WO4-2

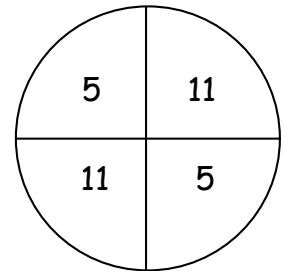
128) How many three-digit numbers contain the digit 3 at least once? (2) 2001-WO5-2

129) The number $-\frac{63}{5}$ is between two consecutive odd integers. What is the product of these two integers? (1) 2001-WO6-1

130) Consider the set $\{4, 6, n\}$. The product of any two integers in the set is 1 less than a perfect square? What is the least possible value for n ? (2) 2001-WO7-6

131) Three 3-digit numbers are formed using the digits 1 through 9 exactly once each. The hundreds digit of the first number is 1. The tens digit of the second number is 8. The units digit of the third number is 5. The ratio of the first number to the second number to the third number is 1:3:5 respectively. What is the sum of the three numbers? (2) 2001-WU7-7

132) An unlimited number of darts are to be thrown at a dart board with possible scores shown. What is the greatest whole number score that is not possible to achieve? (2) 2001-WO8-3



133) What is the value of the following expression, where all natural numbers 1 through 99 are included and the repeated operations are add, add, subtract? (3) 1996-WU5-4

$$1 + 2 - 3 + 4 + 5 - 6 + 7 + 8 - 9 + 10 + 11 - 12 + \dots + 97 + 98 - 99$$

134) What is the remainder when 5^{30} is divided by 7? (3) 1996-WU9-3

135) The product of the digits of a three digit number is 63. What is the greatest possible value of this number? (1) 1996-WU10-8

136) Replace each of the variables a , b and c with a different digit selected from the set $\{2, 3, 5, 6, 8\}$. What is the greatest possible value of the expression $a^b + c$ that is less than 100? (1) 1996-WU10-9

137) What is the smallest positive integer greater than 5 with the property that the number of odd primes less than or equal to it equals the number of odd non-primes less than or equal to it? (2) 1996-WU13-8

138) Each term in a sequence of whole numbers is one more than the square of the previous term. Given that the fourth term is 26, what is the sum of the third and fifth terms? (1) 1996-WU14-8

139) Given that 3^n is a factor of $15!$, what is the greatest possible integral value of n ? (2) 1996-WU14-9

140) Ten days from Thursday, it will be Sunday. What day of the week will it be 1,000,000 days from Thursday? (2) 1996-WU15-2

141) Find a two-digit number with an odd number of divisors and the sum of its digits equal to 13. (1) 1996-WU15-5

142) The sum of the digits of a certain two-digit whole number is equal to the square root of the number. Find the number. (1) 1996-WU20-3

143) Given that $0.5 \leq x \leq 1$ and $1 \leq y \leq 2$, what is the greatest possible value of $y \div x$? (1) 1996-WO5-4

144) How many different ways can 36 identical chairs be placed in rows if all have the same number of chairs, each chair is in exactly one row, and no row has more than 20 chairs or less than 3 chairs? (2) 1993-WU1-1

145) Find the smallest positive integer, n , such that the product of 135 and n is a perfect square. (2) 1993-WU3-6

146) Find the value of x such that the four-digit number $x15x$ is divisible by 18. (2) 1993-WU9-10

147) What is the largest perfect square that is a factor of 64,000? (2) 1993-WU9-9

148) What numeral is in the 100th decimal place in the decimal representation of $\frac{6}{7}$? (1) 1993-WU9-10

149) Find the units digit of 4^{50} . (2) 1993-WU15-4

150) What are the rightmost three digits of 5^{1993} ? (2) 1993-WO8-7

151) Use the numbers 1, 2, 3 and 4 each once to replace the variables a, b, c and d. What is the largest possible value for the expression $a + b \cdot c^d$? (1) 1995-WU1-1

152) What is the sum of the even integers from 2 to 220 inclusive? (1) 1995-WU1-4

153) What is the smallest composite number whose prime factorization contains a number other than 2, 3, 5 or 7? (1) 1995-WU4-2

154) An integer is called, "decreasing" if each digit is less than the one to its left. For example, 5320 is decreasing. How many decreasing integers are there between 2000 and 7000? (1) 1995-WU8-10

155) How many integers satisfy the inequality: $-8\pi \leq n \leq 10\pi$? (2) 1995-WU10-7

156) What is the smallest positive value that the expression $1 - 2 - 3 - 4 - 5 - 6 - 7 - 8$ can have when grouping symbols are added? (2) 1995-WU17-4

157) When grouping symbols are inserted into the expression $2 + 3 \cdot 4^5$, what is the largest possible value that can be obtained? (1) 1995-WU19-2

158) For how many numbers n from 1 to 20 is $\frac{n!}{(n+1)}$ an integer? (2) 1995-WO3-8

159) Find the smallest positive integer that gives a remainder of 5 when divided by 6, a remainder of 6 when divided by 7, and a remainder of 7 when divided by 8. (1) 1995-WO4-1

160) How many zeros are there to the right of the last non-zero digit of $(5!)!$? (3) 1995-WO9-9

Number Theory – Answer Key

1) 11	19) 16	37) 5	55) 48
2) 31	20) 15	38) 20	56) 1
3) 11	21) 3	39) 2	57) $-5/3$
4) 20	22) 6	40) 40	58) 3
5) 2008	23) 12	41) 1,056	59) 27
6) 22	24) 301	42) 5	60) -1
7) 7	25) 29	43) 3	61) 39
8) 3	26) 16	44) 24	62) 26
9) 3	27) $1/2$	45) 6	63) 480
10) 23	28) 8	46) 567	64) 1
11) 9	29) 12	47) 84,000	65) July 15
12) 8	30) 1	48) 72	66) 29
13) 10,236	31) 100	49) -20	67) 4
14) 24	32) 0	50) 23	68) 2
15) 20	33) 360	51) 91	69) 23
16) 3	34) 79	52) 0.8	70) 1,537
17) 3,214	35) angle	53) 3	
18) 4	36) 0	54) Friday	

71) 121	90) $\frac{q-p}{2}$	108) 1	126) 7
72) 3	91) 135	109) 7	127) 22
73) 10	92) 12	110) 35	128) 252
74) 29	93) 6	111) 10	129) 143
75) 4/9	94) 3.1	112) 14	130) 20
76) 13	95) 9	113) 1,080	131) 1,161
77) 364	96) 39	114) 18	132) 39
78) 71	97) 65	115) 54	133) 1,584
79) 96	98) 153	116) 91	134) 1
80) 24	99) 48	117) 0	135) 971
81) 256	100) 16	118) 25	136) 72
82) <i>June</i>	101) 5/33	119) 39	137) 87
83) 312	102) 12	120) 11	138) 682
84) 369	103) 4	121) 129	139) 6
85) 6	104) 378	122) 2,589	140) <i>Friday</i>
86) 8	105) 97	123) 8	141) 49
87) 45	106) 12	124) 18	142) 81
88) 0	107) 60	125) 2	
89) 5			

143) 4

144) 6

145) 15

146) 1

147) 32,400

148) 1

149) 6

150) 125

151) 163

152) 12,210

153) 22

154) 35

155) 57

156) 2

157) 3,200,000

158) 11

159) 167

160) 28

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