GMAT QUANT PRACTICE PAPER

PROBLEM-SOLVING

QUESTION: 1

How many different pairs (a, b) of positive integers are there such that $a \leq b$ and $\frac{1}{a} + \frac{1}{b} = \frac{1}{19}$?

A. 1
B. 2
C. 3
D. 4
E. 5

QUESTION: 2

When $x^2 + mx + n$ polynomial is divided by *(x-m)* and *(x-n)*, the remainders are *m* and *n* respectively. How many pairs of (m;n) are there?

A. 1
B. 2
C. 3
D. 4
E. 5

QUESTION: 3

The set of solutions for the equation $((x^2 - 25)^2 = x^2 - 10x + 25)$ contains how many real numbers?

A. 0
B. 1
C. 2
D. 3
E. 4

QUESTION: 4

Q.

If the sum of the first 30 positive odd integers is k, what is the sum of first 30 non-negative even integers?

A. k-29
B. k-30
C. k
D. k+29
E. k+30

QUESTION: 5

Find the number of integer solutions to $|a| + |b| + |c| = 10$, where none of a, b or c is 0.

A. 36

B. 72

C. 144

D. 288

E. 576

QUESTION: 6

The total number of integer pairs (c, d) satisfying the equation $c + d = cd$ is

A. 0
B. 1
C. 2
D. 3
E. 4

QUESTION: 7

If x and y are real numbers, the least possible value of the expression $4(x - 2)^2 + 4(y - 3)^2 - 2(x - 3)^2$ .. is ?

(A) – 8
(B) – 4
(C) – 2
(D) 0
(E) 2

QUESTION: 8

How many different pairs of positive integers (a, b) satisfy the equation
$\frac{1}{a}+\frac{1}{b}=\frac{34}{51}$?

A. 6
B. 3
C. 2
D. 1
E. 0

QUESTION: 9

What is the product of the roots of $x^2 - 7|x| - 30 = 0$?

A. -100
B. -9
C. 0
D. 9
E. 100

QUESTION: 10

If v < z, which of the following could be the value of S where 10v/(v + z) + 20z/(v + z) = S and v and z are positive integers?

(A) 25
(B) 20
(C) 18
(D) 14
(E) 8

QUESTION: 11

If m and n are the roots of x^2 - 7|x| - 18 = 0, then what is the value of |m - n| ?

A. 0
B. 1

C. 2
D. 9
E. 18

QUESTION: 12

Brian writes down four integers w > x > y > z whose sum is 44. The pairwise positive differences of these numbers are 1, 3, 4, 5, 6 and 9. What is the sum of the possible values of w?

(A) 16

(B) 31

(C) 48

(D) 62

(E) 93

QUESTION: 13

Find the minimum value of $(x^2 + 7x + 14)$.

A. 14
B. -7
C. 0
D. 7
E. 1.75

QUESTION: 14

A dealer offers a cash discount of 20%. Further, a customer bargains and receives 20 articles for the price of 15 articles. The dealer still makes a profit of 20%. How much percent above the cost price were his articles marked?

A) 100%
B) 80%
C) 75%
D) 66+2/3%
E) 50%

QUESTION: 15

All the numbers 2, 3, 4, 5, 6, 7 are assigned to the six faces of a cube, one number to each face. For each of the eight vertices of the cube, a product of three numbers is computed, where the three numbers are the numbers assigned to the three faces that include that vertex. What is the greatest possible value of the sum of these eight products?

(A) 312

(B) 343

(C) 625

(D) 729

(E) 1680