GMAT QUANT PRACTICE PAPER

PROBLEM-SOLVING

Question 1

The City Opera House is expanding. Currently the city block containing the opera house is rectangular-shaped with a total volume of 9600 feet. If the expanded Opera House is 2.5 times as long, wide, and deep as the original building, what would the new volume be?

A 24,000

B 60,000

C 72,000

D 150,000

E 245,000

Question 2

In a university club of 200 people, the number of Political Science majors is 50 less than 4 times the number of International Relations majors. If one fifth of the club members are neither Political Science majors nor International Relations majors, and no club member is majoring in both Political Science and International Relations, how many of the club members are International Relations majors?

A 42

B 50

C 71

D 95

E 124

Question 3

If the total cost of 20 pairs of shoes is equal to the total revenue generated from the sale of 25 pairs of shoes, what is the percent of profit or loss made on the sale of each pair of shoes, assuming each pair of shoes cost the same dollar amount and each pair of shoes sold for the same dollar amount?

A 25% loss

B 25% profit

C 20% loss

D 20% profit

E 5% profit

Question 4

Clarissa spent all day on a sightseeing trip in Britain. Starting from her hotel, Clarissa boarded a bus, which traveled at an average speed of 15 miles per hour through a 30 mile section of the countryside. The bus then stopped for lunch in London before continuing on a 3 hour tour of the city's sights at a speed of 10mph. Finally, the bus left the city and drove 40 miles straight back to the hotel. Clarissa arrived at her hotel exactly 2 hours after leaving London. What was the bus's average rate, approximately, for the entire journey?

A 8

B 14

C 21

D 25

E 30

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Question 5

Meredith jogged to the top of a steep hill at an average pace of 6 miles per hour. She took the same trail back down. To her relief, the descent was much faster; her average speed rose to 14 miles per hour. If the entire run took Meredith exactly one hour to complete and she did not make any stops, how many miles, approximately, is the trail one way?

A 2

B 3

C 4

D 5

E 6

Question 6

At a medical research lab, nine doctors are conducting multiple clinical trials. Six of the doctors are working on a clinical trial with exactly one other doctor and three doctors are working on a clinical trial with exactly two other doctors. If two doctors are selected at random from the lab, what is the probability that those two doctors are NOT working together on a clinical trial?

A 1/12

B 2/12

C 5/12

D 7/12

E 10/12

Question 7

For which of the following functions g is $g(z) = g(1 - z)$ for all z?

A $g(z) = 1 - z$

B $g(z) = 1 - z^2$

C $g(z) = z^2 - (1 - z)^2$

D $g(z) = z^2(1 - z)^2$

E $g(z) = z / 1-z$

Question 8

A right triangle has sides that are consecutive even integers. The longest side is z. Which of the following equations could be used to find z?

A $(z - 4)^2 = z^2 - (z - 2)^2$

B $(z - 2)^2 = (z - 4) - z^2$

C $z^2 + 4^2 + 2^2 = 6^2$

D $(z - 2)^2 = z^2 - (z - 1)^2$

E $(z + 2)^2 + (z + 4)^2 = z^2$

Question 9

Rectangle LMNO is inscribed in a circle with center P. If the area of the rectangle is 8 times its width, and the distance from P to side LM is 3, what is the circle's approximate circumference?

A 5

B 10

C 30

D 45

E 75

Question 10

Larry's Lawn Service charges $*w*/hour for the first *x* hours of grass trimming, then *w* + 2 dollars for every hour of work over *x* hours. How much more will a homeowner be charged for a grass trimming job that took *z* hours if *z* > *x* than for a job which took only *w* hours if *x* < *w* < *z*?

A x(z + w)

B (w + 2) – zx

C (w + 2) (z – w)

D xw + 2 – (z – w)

E w(x + z) + x

DATA SUFFICIENCY

Mrs. Brown is dividing 50 students into 3 groups for a class project. How many children are in the largest group?

(1) The total number of children in the two smaller groups is equal to the number of children in the largest group.

(2) The smallest group contains 6 children.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.

D EACH statement ALONE is sufficient.

E Statements (1) and (2) TOGETHER are NOT sufficient

Question 2

The total cost of food for the raccoons at the Altadena Wildlife Rescue has increased as the number of raccoons at the Rescue has increased. If it costs the same amount to feed each raccoon, is the cost of food for 7 raccoons more than $2,000 annually?

(1) It costs more than $1,000 annually to feed 4 raccoons.

(2) It costs more than $1,500 annually to feed 5 raccoons.

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B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

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Question 3

Helena invested $8000 in the Tallahassee City Bank at z% simple annual interest for one year with a yield of $450. How much should she invest at s% simple annual interest for one year to yield the same amount?

(1) s/100 = 3/4

(2) s = .4z

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

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Question 4

A certain voting bloc has how many voters?

(1) If no additional voters are added to the bloc, and 4 of the current voters leave the bloc, there will be fewer than 20 voters.

(2) If 4 more voters join the bloc and all of the present voters remain, there will be at least 27 voters.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

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Question 5

Is y an integer?

(1) 7y is an integer.

(2) y/7 is an integer.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

C BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.

D EACH statement ALONE is sufficient.

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Question 6

What is the value of positive two-digit integer x?

(1) The sum of the two digits is 5.

(2) x is prime.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

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D EACH statement ALONE is sufficient.

E Statements (1) and (2) TOGETHER are NOT sufficient.

Question 7

Esther is giving Christmas presents to her family members. Each family member gets the same number of presents and no presents were leftover. If each family member gets at least one present, did each family member receive more than one present?

(1) Esther has forty Christmas presents to give out.

(2) If the number of family members were doubled, it would not be possible for each family member to get at least one present.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

B Statement (2) ALONE is sufficient, but statement (1) alone is not sufficient.

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Question 8

A codebreaking device is made up of a rectangular box filled with x cylinders of ball bearings placed together such that the diameter of the bearings and the cylinders are equal, and the cylinders line up evenly, touching, with no extra room inside the device. If the cylinders are the same height as the box, and the box is 18 inches long and 10 inches wide, what's the value of *x*?

(1) 9 cylinders can line up along the length of the box.

(2) Each ball bearing has a radius of 1.

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D EACH statement ALONE is sufficient.

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Question 9

How many girls are members of both the Diving Team and the Swim Team?

(1) At a joint meeting of the Diving and Swim Teams, no members were absent and 18 girls were present.

(2) The Diving Team has 27 members, one-third of whom are girls, and the Swim Team has 24 members, half of whom are girls.

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

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Question 10

J and K are positive numbers. Is J/K > 1?

(1) JK < 1

(2) J-K > 0

A Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

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