

GMAT QUANT PRACTICE PAPER

DATA SUFFICIENCY

1.

If a and b are non-negative integers, is $\sqrt{a} + \sqrt{b} = 1$?

(1) $\sqrt{a} + \sqrt{b} = 2\sqrt{a} + 2\sqrt{b}$

(2) $\sqrt{a} < 3$

2.

If Kriti paid a total of Rs. 1,350 for two dresses and sold one at 6% loss and the other at 7.5% profit, what was the price she paid for each dress?

(1) Kriti made neither a profit nor a loss from the transaction.

(2) Kriti sold one dress for Rs. 705.

3

What is the speed of the boat in still water?

(1) The boat covers a distance of 140 km in 7 hours upstream.

(2) The boat covers the same distance in 5 hours downstream.

4.

What is the value of a positive integer k ?

(1) k has two positive factors

(2) $5,743 < k < 5,779$

5.

What is the sum of 3 consecutive prime numbers?

(1) The 3 prime numbers are in arithmetic progression.

(2) The second largest of them is 5.

6.

Find the value of $\left(\frac{x^3}{y^2 + 1}\right)$.

(1) $\left(\frac{x^2}{y^2} = \frac{1}{4}\right)$

(2) $\left(\frac{x}{y} = \frac{1}{2}\right)$

7.

Beth's pizzeria offers x different toppings. What is the value of x ?

(1) There are an equal number of different pizzas that can be made with $(x - 2)$ toppings as there are different pizzas with just 2 toppings.

(2) If the pizzeria were to add one additional topping, the number of different pizzas that could be made with 4 toppings would double.

8.

What is Mr Kashyap's salary?

(1) Mr Kashyap bought 50 kg rice with one-fourth of his salary.

(2) Had the rice been 20% cheaper than its current price, Mr Kashyap could have bought 50 kg rice for \$ 100 more than one-tenth of his salary.

9.

When choosing two animals without replacement, what is the probability of randomly choosing two cows out of all the animals at Old McDonald's farm?

(1) The ratio of the number of cows to the number of goats at the farm is 5:6.

(2) The only animals at the farm are cows and goats.

10.

What percent of the boys and girls in a certain class own a bicycle?

(1) One-third of the boys in the class own a bicycle.

(2) Two-thirds of the girls in the class own a bicycle.

11.

If Jay has 99 problems, in how many ways can he select k of them to rap about?

- (1) Jay can select $k+1$ of his problems in 3764376 different ways.
(2) Jay can select $k-1$ of his problems in 4851 different ways.

12.

Four more work visas are available and five employers from country A are interested in hiring chemical engineers from abroad. Six applicants from country B have registered as candidates for engineering posts in country A. Assuming each of the visas will go to one of these six applicants and no company will get more than one, how many possible pairings of employers and employees can there be?

- (A) 75
(B) 60
(C) 40
(D) 30
(E) 20

13.

p different prizes are hidden inside v vases. One of the vases can hold up to two prizes, while the rest can hold only one prize. Are there more than 12 different possible arrangements of the prizes hidden in the vases?

- 1) $p = 3$
2) $v = 3$

PROBLEM SOLVING

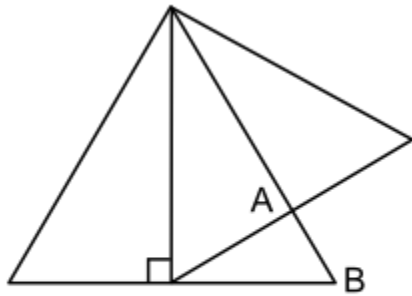
1. Two tanks of similar volume are full of a mixture of oil and water. In the first, the ratio of oil and water is 5:8 and in the second, it is 7:19. If both these tanks are poured in a larger tank, what would be the resultant ratio of oil and water?

- A. 17:52
B. 1:3
C. 17:35
D. 151:304
E. 1:2

2. One side of a parking stall is defined by a straight stripe that consists of n painted sections of equal length with an unpainted section $1/2$ as long between each pair of consecutive painted sections. The total length of the stripe from the beginning of the first painted section to the end of the last painted section is 203 inches. If n is an integer and the length, in inches, of each unpainted section is an integer greater than 2, what is the value of n ?

- A. 5
B. 9
C. 10
D. 14
E. 29

3. A student took 7 tests. The student's average score on the first 5 tests was 73. The student's average score on the final 5 of these 7 tests was 79. How much greater than the student's average score on the first 2 of these tests was the student's average score on the final 2 of these tests?
- A. 6
 B. 7
 C. 10
 D. 15
 E. 18



4. The height of an equilateral triangle is the side of a smaller equilateral triangle, as shown above. If the side of the large equilateral triangle is 1, what is AB?
- A. $1 - \sqrt{3}/2$
 B. 0.25
 C. $2 - \sqrt{3}$
 D. $1/3$
 E. $1 - \sqrt{3}/4$
5. What is the least positive integer which when divided by 16, 18, 20 and 25 leaves 4 as remainder in each case but when divided by 7 leaves no remainder ?
- (A) 8004
 (B) 13004
 (C) 18004
 (D) 18014
 (E) 18024
6. For any integer $k > 1$, the term "length of an integer" refers to the number of positive prime factors, not necessarily distinct, whose product is equal to k . For example, if $k = 24$, the length of k is equal to 4, since $24 = 2 \times 2 \times 2 \times 3$. If x and y are positive integers such that $x > 1$, $y > 1$, and $x + 3y < 1000$, what is the maximum possible sum of the length of x and the length of y ?
- A. 5
 B. 6

- C. 15
- D. 16
- E. 18

7. The number obtained by interchanging the two digits of a two-digit number is lesser than the original number by 54. If the sum of the two digits of the number is 12, then what is the original number?

- (A) 28
- (B) 39
- (C) 82
- (D) 89
- (E) 93

8. The difference between a two-digit number and the number obtained by interchanging the two digits of the number is 9. If the sum of the two digits of the number is 15, then what is the original number?

- (A) 89
- (B) 87
- (C) 67
- (D) 65
- (E) Cannot be determined.

9. The difference between a two-digit-number and the number obtained by interchanging the two digits of the number is 9. What is the difference between the two digits of the number?

- (A) 5
- (B) 4
- (C) 3
- (D) 2
- (E) 1

10. The points R, T, and U lie on a circle that has radius 4. If the length of arc RTU is 4π , what is the length of line segment RU?

- (A) $\frac{4}{3}$
- (B) $\frac{8}{3}$
- (C) 3
- (D) 4
- (E) 6

11. Yesterday, Candice and Sabrina trained for a bicycle race by riding around an oval track. They both began riding at the same time from the track's starting point. However, Candice rode at a faster pace than Sabrina, completing each lap around the track in 42 seconds, while Sabrina completed each lap around the track in 46 seconds. How many laps around the track had Candice completed the next time that Candice and Sabrina were together at the starting point?

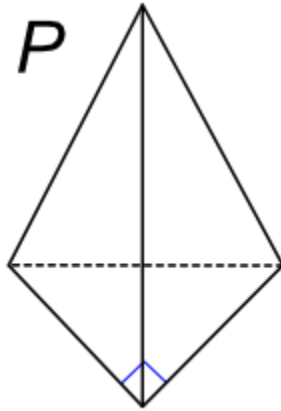
- A. 21
- B. 23
- C. 42
- D. 46
- E. 483

12. There are two numbers such that the sum of twice the first number and thrice the second number is 100 and the sum of thrice the first number and twice the second number is 120. What is the value of the larger number?

- (A) 35
- (B) 32
- (C) 14
- (D) 12
- (E) 10

13. If $|x| + |y| = -x - y$ and xy does not equal 0, which of the following must be true?

- A. $x + y > 0$
- B. $x + y < 0$
- C. $x - y > 0$
- D. $x - y < 0$
- E. $x^2 - y^2 > 0$



14. The base of pyramid P is an isosceles right triangle whose leg is 3. If the height of P is 4, what is the volume of P?

- A. 36
- B. 18
- C. 12
- D. 8
- E. 6