1. If the ratio of the sum of the first 6 terms of a G.P. to the sum of the first 3 terms of the G.P. is 9, what is the common ratio of the G.P?

    A. 3

    B. 1313

    C. 2

    D. 9

    E. 19

2. **Set A contains all the even numbers between 2 and 50 inclusive. Set B contains all the even numbers between 102 and 150 inclusive. What is the difference between the sum of elements of set B and that of set A?**

    A. 2500

    B. 5050

    C. 11325

    D. 6275

    E. 2550

3. <u>Data Sufficiency</u>: A set S contains the following elements: {7, 11, 15, 19, 23, x}. What is the value of x?

    1. The elements are in arithmetic progression

    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.

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.

4. **In the first 1000 natural numbers, how many integers exist such that they leave a remainder 4 when divided by 7, and a remainder 9 when divided by 11?**

    A. 11
    B. 14
    C. 12
    D. 13
    E. 10

5. **Data Sufficiency: What is the 6th term of the Arithmetic sequence?**

    1. The sum of the 6th to the 12th term of the sequence is 77.
    2. The sum of the 2nd to the 10th term of the sequence is 108.

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.

6. **Data Sufficiency: What is the value of X, if X and Y are two distinct integers and their product is 30?**

    1. X is an odd integer
    2. X > Y

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.

7. **<u>Data Sufficiency</u>: Is y an integer?**

    1. y^3 is an integer
    2. 3y 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.

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

8. **<u>Data Sufficiency</u>: Is the positive integer 'x' divisible by 12?**

    1. x is divisible by 6
    2. x is divisible by 8

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.

9. **Data Sufficiency: Is ab positive?**

    1. $(a + b)^2 < (a-b)^2$
    2. $a = b$

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.

10. **Data Sufficiency: When the positive integer Y is divided by 2, is the remainder 1?**

    1. $(-1)^{(Y + 2)} = -1$
    2. Y 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.

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.

11. **Data Sufficiency: Is the two digit positive integer P a prime number?**

    1. (P + 2) and (P - 2) are prime.
    2. (P - 4) and (P + 4) are 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.

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.

12. If "x" is an integer, which of the following inequality(ies) have a finite range of values of "x" satisfying it(them)?

A. $x^2 + 5x + 6 > 0$

B. $|x + 2| > 4$

C. $9x - 7 < 3x + 14$

D. $x^2 - 4x + 3 < 0$

E. (B) and (D

13.

What values of 'x' will be the solution to the inequality $15x - \dfrac{2}{x} > 1$?

A. $x > 0.4$

B. $x < \dfrac{1}{3}$

C. $-\dfrac{1}{3} < x < 0.4, x > \dfrac{15}{2}$

D. $-\dfrac{1}{3} < x < 0, x > \dfrac{2}{5}$

E. $x < -\dfrac{1}{3}$ or $x > \dfrac{2}{5}$

14.

What is the smallest integer that satisfies the inequality $\dfrac{x-3}{x^2-8x-20} > 0$?

A. -2

B. 10

C. 3

D. -1

E. 0

15.

Data Sufficiency : Is a < b?

1. $a^b < b^a$

2. $\dfrac{a}{b} > 1$

16.

Data Sufficiency :Is | a | > | b |?

1. $\dfrac{1}{(a-b)} > \dfrac{1}{(b-a)}$

2. a + b < 0

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.

17.

Data Sufficiency : Is $a^3 > a^2$

1. $\frac{1}{a} > a$

2. $a^5 > a^3$

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.

18.

Data Sufficiency : Is $|a| > a$?

1. $a^2 < a$

2. $\left(\frac{a}{2}\right) > \left(\frac{2}{a}\right)$

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.

19.
Data Sufficiency : Is 'a' positive?
1. a - b > 0

2. 2a - b > 0

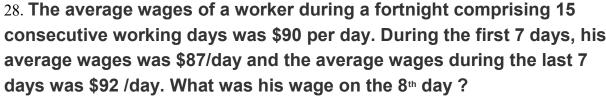A) Statement (1) ALONE is sufficient, but statement (2) alone is not sufficient.

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.
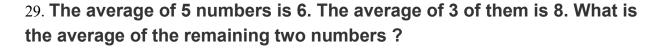
20. **Data Sufficiency :Is $a^n > b^n$?**
1. $a > b$

2. $ab < 0$

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.

21. **In a class of 120 students numbered 1 to 120, all even numbered students opt for Physics, those whose numbers are divisible by 5 opt for Chemistry and those whose numbers are divisible by 7 opt for Math. How many opt for none of the three subjects?**
A. 19

B. 41

C. 21

D. 57

E. 26

22. **Of the 200 candidates who were interviewed for a position at a call center, 100 had a two-wheeler, 70 had a credit card and 140 had a mobile phone. 40 of them had both, a two-wheeler and a credit card, 30 had both, a credit card and a mobile phone and 60 had both, a two wheeler and mobile phone and 10 had all three. How many candidates had none of the three?**
A. 0

B. 20

C. 10

D. 18

E. 25

23.   In a class of 40 students, 12 enrolled for both English and German. 22 enrolled for German. If the students of the class enrolled for at least one of the two subjects, then how many students enrolled for only English and not German?

A. 30

B. 10

C. 18

D. 28

E. 32

24. In a class 40% of the students enrolled for Math and 70% enrolled for Economics. If 15% of the students enrolled for both Math and Economics, what % of the students of the class did not enroll for either of the two subjects?

A. 5%

B. 15%

C. 0%

D. 25%

E. None of these

25. If the mean of numbers 28, x, 42, 78 and 104 is 62, what is the mean of 48, 62, 98, 124 and x ?

A. 78

B. 58

C. 390

D. 310

E. 66

26. The arithmetic mean of the 5 consecutive integers starting with 's' is 'a'. What is the arithmetic mean of 9 consecutive integers that start with s + 2 ?

A. 2 + s + a

B. 22 + a

C. 2s

D. 2a + 2

E. 4 + a

27. **The average weight of a group of 30 friends increases by 1 kg when the weight of their football coach was added. If average weight of the group after including the weight of the football coach is 31 kg, what is the weight of their football coach ?**

A. 31 kg

B. 61 kg

C. 60 kg

D. 62 kg

E. 91 kg

28. **The average wages of a worker during a fortnight comprising 15 consecutive working days was $90 per day. During the first 7 days, his average wages was $87/day and the average wages during the last 7 days was $92 /day. What was his wage on the 8th day ?**

A. $83

B. $92

C. $90

D. $97

E. $104

29. **The average of 5 numbers is 6. The average of 3 of them is 8. What is the average of the remaining two numbers ?**

A. 4

B. 5

C. 3

D. 3.5

E. 0.5

30. **The average age of a group of 10 students was 20. The average age increased by 2 years when two new students joined the group. What is the average age of the two new students who joined the group ?**

A. 22 years

B. 30 years

C. 44 years

D. 32 years

E. None of these

31. **If m, s are the average and standard deviation of integers a, b, c, and d, is s > 0 ?**

1. m > a

2. a + b + c + d = 0