

Board – CBSE

Class – 11

Topic – Reasoning

Very Short Answer Type Questions (1 Mark)

Identify which of the following are statements (Q. No 1 to 7)

1. Prime factors of 6 are 2 and 3.
2. $x^2 + 6x + 3 = 0$
3. The earth is a planet.
4. There is no rain without clouds.
5. All complex numbers are real numbers.
6. Tomorrow is a holiday.
7. Answer this question.

Write negation of the following statements (Q. No 8 to 12)

8. All men are mortal.
9. π is not a rational number.
10. Everyone in Spain speaks Spanish.
11. Zero is a positive number.

Write the component statements of the following compound statements

12. 7 is both odd and prime number
13. All integers are positive or negative.
14. 36 is a multiple of 4, 6 and 12.
15. Jack and Jill went up the hill.

Identify the type 'Or' (Inclusive or Exclusive) used in the following statements (Q. No.16 to 19)

16. Students can take French or Spanish as their third language.
17. To enter in a country, you need a visa or citizenship card.
18. $\sqrt{2}$ is a rational number or an irrational number.
19. 125 is a multiple of 5 or 8.

Which of the following statements are true or false Give Reason. (Question No. 20 to 23)

20. 48 is a multiple of 6, 7 and 8
21. $\pi > 2$ and $\pi < 3$
22. Earth is flat or it revolves around the moon.
23. $\sqrt{2}$ is a rational number or an irrational number.

Identify the quantifiers in the following statements (Q. No. 24 to 26)

24. For every integer p , \sqrt{p} is a real number.
25. There exists a capital for every country in the world.
26. There exists a number which is equal to its square.

Write the converse of the following statements (Q. No. 27 to 30)

27. If a number x is even, then x^2 is also even.
28. If $3 \times 7 = 21$ then $3 + 7 = 10$
29. If n is a prime number, then n is odd.
30. Something is cold implies that it has low temperature.

Write contrapositive of the following statements (Q. No. 31 and 32)

31. If x is even number implies that x^2 is divisible by 4.
32. Check the validity of the statement 'An integer x is even if and only if x^2 is even.'

Answer

1. Statement
2. Not a statement
3. Statement
4. Statement
5. Statement
6. Not a Statement
7. Not a Statement
8. All men are not mortal
9. π is a rational number.
10. Everyone in Spain doesn't speak Spanish
11. Zero is not a positive number.
12. 7 is an odd number. 7 is a prime number.
13. All integer are positive. All integers are negative.
14. 36 is a multiple of 4.
36 is a multiple of 6.
36 is a multiple of 12

15. Jack went up the hill.
Jill went up the hill.
16. Exclusive
17. Inclusive
18. Exclusive
19. Exclusive
20. False, 48 is not a multiple of 7
21. False, p lies between 3 and 4
22. False
23. True
24. For every
25. For every, there exists
26. There exists
27. If x^2 is even, then x is even
28. If $3 + 7 = 10$ then $3 \times 7 = 21$
29. If n is odd, then n a prime number.
30. If something has low temperature, then it is cold.
31. If $6 \leq 7$ then $5 \leq 7$
32. If x^2 is not divisible by 4 then x is not even.
33. Valid.