

Subject: Mathematics

Total Marks: 35

1. 3 rais to 0 ?.

Difficulty: Easy, Marks: 1

2. If two or more points lie on the same line, they are called _____.

Difficulty: Hard, Marks: 2

3. Calculate the area of an equilateral triangle with side length 10 units.

Difficulty: Easy, Marks: 2

4. If a circle has a radius of 3 units, what is its circumference?

Difficulty: Easy, Marks: 2

5. Solve for x: $2x + 5 = 15$.

Difficulty: Easy, Marks: 2

6. What is the area of a parallelogram with base 7 units and height 9 units?

Difficulty: Easy, Marks: 2

7. Determine the perimeter of a rhombus with side length 9 units.

Difficulty: Easy, Marks: 2

8. What is the value of Pi?

Difficulty: Easy, Marks: 2

9. Solve the equation $\log(x) = 3$.

Difficulty: Easy, Marks: 2

10. Calculate the perimeter of a rectangle with length 10 units and width 4 units.

Difficulty: Easy, Marks: 2

11. Calculate the area of a regular hexagon with side length 9 units.

Difficulty: Medium, Marks: 3

12. What is the volume of a cone with radius 5 units and height 12 units?

Difficulty: Medium, Marks: 3

13. Determine the surface area of a sphere with a radius of 9 units.

Difficulty: Medium, Marks: 3

14. Prove the existence and uniqueness of solutions to the Cauchy problem for the heat equation.

Difficulty: Hard, Marks: 5

15. 3 rais to 0 ?.

Difficulty: Easy, Marks: 1