create a list of 12th class maths questions according to CBSE board India

1. Prove that a2 + b2 + c2 = 3abc if a, b, c are in geometric progression.

2. Find the sum of the first 10 terms of the G.P: 6, 18, 54, ...

3. Find the value of a for which the quadratic equation 3x2 – 5ax + 7 = 0 has equal roots.

4. Find the sum of elements of the matrix 2/3 > 1/3 < 2/5

5. Find the equation of the straight line passing through (1, -2) and parallel to the line y = 2x + 1

6. If the roots of equation f(x) = 0 are 2, 3, 4. Express f(x) as the product of linear factors.

7. Prove that the surface of the right circular cone is equal to half of the circumference of its base times its height.

8. Solve for x: x3 + 5x = 39

9. Show that the three medians of a triangle are concurrent.

10. Find the equation of a circle with centre at (2,-3) and radius 5.

11. Find the inverse of the function y = 2x + 1

12. Find the equation of a hyperbola with foci (2,1) and (–2,1).