

Question set - 01

July 7, 2020

1. Factorize the number 693 into primes, e.g. factorizing 54 gives $2 \times 3 \times 3 \times 3 = 2 \times 3^3$
2. Draw the graph of the following equations

$$x - 2y = 0$$

$$3x + 4y = 20$$

Do these two lines meet? If they do, what is the point of intersection? Calculate the point of intersection using algebraic method.

3. Repeat the above activity for the following two lines

$$2x + 4y - 12 = 0$$

$$x + 2y - 4 = 0$$

4. Mark and John together have 45 marbles. Both of them lose 5 marbles each, and the product of the number of marbles they now have is 124. How many marbles did they have to start with?
5. There is a circular park. The park has two diametrically opposite gates A and B that are 13 m apart. I want to erect a pole at a point P on the boundary of the park in such a way that the difference between its distance from A and B is 7 m. Is this possible? If yes, how? If no, why?