1. The product of two consecutive integers is 56. Find the integers.

2. The sum of the squares of two consecutive natural numbers is 41. Find the numbers.

3. Find the two natural numbers which differ by 5 and the sum of whose squares is 97.

4. The sum of a number and its reciprocal is 4.25. Find the number.

5. Two natural numbers differ by 3. Find the numbers, if the sum of their reciprocals is $\dfrac{7}{10}$.

6. Divide 15 into two parts such that the sum of their reciprocals is $\dfrac{3}{10}$.

7. The sum of the squares of two positive integers is 208. If the square of the larger number is 18 times the smaller number, find the numbers.

8. The sum of the squares of two consecutive positive even numbers is 52. Find the numbers.

9. Find two consecutive positive odd numbers, the sum of whose squares is 74.

10. The denominator of a positive fraction is one more than twice the numerator. If the sum of the fraction and its reciprocal is 2.9; find the fraction.

11. Three positive numbers are in the ratio $\dfrac{1}{2} : \dfrac{1}{3} : \dfrac{1}{4}$. Find the numbers if the sum of their squares is 244.

12. Divide 20 into two parts such that three times the square of one part exceeds the other part by 10.

13. Three consecutive natural numbers are such that the square of the middle number exceeds the difference of the squares of the other two by 60.

Assume the middle number to be x and form a quadratic equation satisfying the above statement. Hence; find the three numbers.

14. Out of three consecutive positive integers, the middle number is p. If three times the square of the largest is greater than the sum of the squares of the other two numbers by 67; calculate the value of p.

15. A can do a piece of work in 'x' days and B can do the same work in $(x + 16)$ days. If both working together can do it in 15 days; calculate 'x'.

16. One pipe can fill a cistern in 3 hours less than the other. The two pipes together can fill the cistern in 6 hours 40 minutes. Find the time that each pipe will take to fill the cistern.

17. A positive number is divided into two parts such that the sum of the squares of the two parts is 20. The square of the larger part is 8 times the smaller part. Taking x as the smaller part of the two parts, find the number.

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