AKSHAYA EDUCATIONAL FOUNDATION

QUADRATIC EQUATIONS

1. Find two consecutive natural numbers whose product is 20.

Ans. $4,5$

2. The product of two successive integral multiples of 5 is 300. Determine the multiples.

Ans. $15,20\ or\ -20,-15$

3. The difference of two numbers is 4 . If the difference of their reciprocals is $\frac{4}{21}$, find the numbers.

Ans. $7,3\ or\ -3,-7$

4. A two-digit number is such that the product of the digits is 12. When 36 is added to the number the digits interchange their places. Determine the number.

Ans. 26

5. A two digit number is 4 times the sum of its digits and twice the product of its digits. Find the number.

Ans. 36

6. The sum of two numbers a and b is 15, and the sum of their reciprocals $\frac{1}{a}$ and $\frac{1}{b}$ is $3/10$. Find the numbers a and b.

Ans. $a=5,b=10\ or\ a=10,b=5$

7. Three consecutive positive integers are such that the sum of the square of the first and the product of other two is 46, find the integers.

Ans. $4,5,6$

8. The difference of squares of two numbers is 180. The square of the smaller number is 8 times the larger number. Find two numbers.

Ans. $18,12;18,-12$

9. The difference of two natural numbers is 3 and the difference of their reciprocals is $\frac{3}{28}$. Find the numbers.

Ans. $7,4$

10. The numerator of a fraction is 3 less than the denominator. If 2 is added to both the numerator and the denominator, then the sum of the new fraction and the original fraction is $\frac{29}{20}$. Find the original fraction.

Ans. $\frac{7}{10}$