Bronx High School of Science
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Mathematics Department
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Name: _____ M$3A Verbal Problems Involving Quadratic Equations

1) The square of a number increased by 3 times the number is 28. Find the number.

2) When the square of a certain number is diminished by 9 times the number, the result is 36. Find the number.

3) A certain number added to its square is 30. Find the number.

4) The square of a number exceeds the number by 72. Find the number.

5) The square of a number exceeds 5 times the number by 24. Find the number.

6) The square of a number decreased by the number is 90. Find the number.

7) The square of a number decreased by 15 is equal to twice the number. Find the number.

8) The square of a number is equal to the sum of 21 and 4 times the number. Find the number.

9) Find two positive numbers whose ratio is 2:3 and whose product is 600.

10) The larger of two positive numbers is 5 more than the smaller. The product of the numbers is 36. Find the numbers.

11) In the balcony of a theatre, there are 240 seats. The number of seats in each row is 14 more than the number of rows. Find the number of rows.

12) The sum of two numbers is 9. Their product is 14. Find the numbers

13) The product of two consecutive integers is 56. Find the integers.

14) The product of two consecutive odd integers is 99. Find the integers.

15) Twice the square of a certain number decreased by 6 times the number is 80. Find the number.

16) Nine times a certain number is 5 less than twice the square of the number. Find the number.

17) Four times the square of a certain positive number exceeds 8 times the number by 12. Find the number.

18) If 5 times the square of a certain number is decreased by twice the number, the result is 16. Find the number.

19) The sum of the square of two positive consecutive integers is 41. Find the integers.

20) The sum of the squares of two positive consecutive even integers is 41. Find the integers.

21) Find three consecutive odd integers such that the square of the first increased by the product of the other two is 224.

22) The sum of two numbers is 10. The sum of their squares is 52. Find the numbers.

23) The sum of two numbers is 12. The sum of their squares is 104. Find the numbers.

24) The difference between two numbers is 3. The sum of the squares of the numbers is 89. Find the numbers.

25) The sum of a number and its reciprocal is $-\frac{10}{3}$. Find the number.

26) The sum of a number and its reciprocal is $2\frac{1}{6}$. Find the number.

27) The square of Clara's age 2 years from now is equal to 20 times her age 3 years ago. Find Clara's present age.

28) When a positive number is decreased by its reciprocal, the result is $2\frac{1}{10}$. Find the number.

29) Six times the square of a negative number decreased by 5 times the number equals 1.

30) Find all numbers satisfying the following condition: The difference of the squares of a number and one-half the number is 27.