Name : _____

Score : _____ Date : _____

MATH MONKS

System of Equations: Three Variables Word Problems

1 The sum of the digits of a three-digit number is 16. If the ten's digit of the number is 3 times the unit's digit and the unit's digit is one-fourth of the hundredth digit then what is the number?

2 If the equation of a parabola is generally expressed as, $y = ax^2 + bx + c$, find the equation of one that passes through the points (-2, 40), (1, 7), (3, 15).

3 There are 12 pieces of five, ten, and twenty rupee coins whose total value is $105. When the number of five and ten rupee coins are interchanged, the total value increases by $20. Find the number of coins of each type.

4 Rob has a bag containing 35 nickels and some quarters. The total value of these coins is less than $2.50. What is the maximum number of quarters that meets the given condition?

Name : _____

Score : _____ Date : _____

MATH MONKS

System of Equations: Three Variables Word Problems

Answers

1. The sum of the digits of a three-digit number is 16. If the ten's digit of the number is 3 times the unit's digit and the unit's digit is one-fourth of the hundredth digit then what is the number?

   Ans: 862

2. If the equation of a parabola is generally expressed as, $y = ax^2 + bx + c$, find the equation of one that passes through the points (-2, 40), (1, 7), (3, 15).

   Ans: $y = 3x^2 - 8x + 12$

3. There are 12 pieces of five, ten, and twenty rupee coins whose total value is $105. When the number of five and ten rupee coins are interchanged, the total value increases by $20. Find the number of coins of each type.

   Ans: Number of 5 rupee coins = 7, Number of 10 rupee coins = 3, Number of 20 rupee coins = 2

4. Rob has a bag containing 35 nickels and some quarters. The total value of these coins is less than $2.50. What is the maximum number of quarters that meets the given condition?

   Ans: 3