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## CBSE Sample Paper Class 9 Mathematics 2019-20

Subject: Mathematics Class: 9 Maximum Marks: 80 Duration: 3 hours

Section A: Objective Type Questions (Each question carries 1 mark)

1. If the length of a rectangle is doubled and its breadth is halved, then the area of the rectangle: (a) doubles (b) becomes four times (c) remains the same (d) becomes half
2. If the sides of a triangle are in the ratio 3:4:5, then the triangle is: (a) equilateral (b) isosceles (c) scalene (d) right-angled

Section B: Short Answer Type Questions (Each question carries 2 marks)

3. Find the value of 'k' if the given pair of linear equations have infinitely many solutions:  $3x + 4y = 10$   $6x + ky = 15$
4. Solve the following quadratic equation:  $x^2 - 5x + 6 = 0$

Section C: Long Answer Type Questions (Each question carries 4 marks)

5. In an examination, the average marks of a student in 5 subjects are 80. If the average marks in 3 subjects are 85 and in another subject, the student scored 90 marks, then find the marks scored by the student in the remaining subject.
6. A toy company manufactures two types of dolls, A and B. For every doll of type A, they require 2 hours of molding time and 1 hour of painting time. For every doll of type B, they require 1 hour of molding time and 2 hours of painting time. In a day, the company has 8 hours of molding time and 10 hours of painting time available. If the profit on each doll of type A is Rs. 20 and the profit on each doll of type B is Rs. 30, how many dolls of each type should the company produce to maximize its profit?

Section D: Higher Order Thinking Skills Questions (Each question carries 6 marks)



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7. A motorboat can travel 30 km upstream in 6 hours and the same distance downstream in 4 hours. Find the speed of the boat in still water and the speed of the stream.
8. Find the roots of the quadratic equation  $2x^2 + 5x - 3 = 0$  by using the quadratic formula.

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