Worksheet: Linear Programming

Karnataka State Board · Class 12 · Mathematics · 3 questions · 14 marks

Name: _____	Date: _____	Score: _____ / 14

Q1. Maximise Z = 3x + 4y subject to: x + y ≤ 4; x + 2y ≤ 6; x ≥ 0; y ≥ 0. *[3 marks]*

Q2. A factory makes two products A and B. Product A requires 2 hours of machine time and 1 hour of labour; product B requires 1 hour of machine time and 2 hours of labour. Machine time available: 10 hours; labour available: 8 hours. Profit: A gives ₹4 per unit, B gives ₹3 per unit. How many units of A and B maximise profit? *[5 marks]*

Q3. Minimise Z = 5x + 10y subject to: x + 2y ≥ 120; x + y ≥ 60; x − 2y ≥ 0; x ≥ 0; y ≥ 0. *[6 marks]*