Worksheet: Linear Inequalities

Uttar Pradesh State Board · Class 11 · Mathematics · 9 questions · 34 marks

Name: _____ Date: _____ Score: _____ / 34

Q1. Solve -4x + 12 > 0 for real x. *[2 marks]*

Q2. Solve 3x - 5 < x + 7 for real x, and write the solution in interval notation. *[3 marks]*

Q3. Solve 2(x-1) >= x+3 and describe how the solution is shown on a number line. *[3 marks]*

Q4. Solve -5 <= 2x - 3 < 9 for real x. *[4 marks]*

Q5. Solve the system: 2x - 3 < 7 and 3x + 1 >= 4. *[4 marks]*

Q6. A student scored 55 and 68 in the first two unit tests. Find the minimum marks needed in the third test for an average of at least 65. *[4 marks]*

Q7. Find all pairs of consecutive even positive integers, both larger than 8, whose sum is less than 40. *[5 marks]*

Q8. A manufacturer has 400 litres of a 10% acid solution. How many litres of a 25% acid solution must be added so the resulting mixture is more than 12% but less than 15% acid? *[5 marks]*

Q9. A liquid must be kept between 20°C and 25°C. Find the corresponding Fahrenheit range, given C = (5/9)(F-32). *[4 marks]*