Inequalities Revision Sheet

Answers at the back

Set 1: Graph the following inequalities:

Q1. $x \leq 4, x \in N$	**Q2.** $x < 3, x \in N$	**Q3.** $x \geq -1, x \in N$
Q4. $x < 1, x \in Z$	**Q5.** $x > -4, x \in Z$	**Q6.** $x \leq -3, x \in Z$
Q7. $x < -2, x \in R$	**Q8.** $x \geq 2, x \in R$	**Q9.** $x > -4, x \in R$
Q10. $x > 2, x \in N$	**Q11.** $x \geq -4, x \in Z$	**Q12.** $x \leq -1, x \in R$
Q13. $x > \frac{1}{2}, x \in R$	**Q14.** $x < \frac{5}{2}, x \in N$	**Q15.** $x \leq -\frac{1}{2}, x \in Z$

Set 2: Solve the following inequalities and show your solution on a number line:

Q16. $2x + 3 \leq 11, x \in N$	**Q17.** $4x - 7 \geq 5, x \in N$	**Q18.** $2x - 3 < 7, x \in Z$
Q19. $4x + 3 > -9, x \in Z$	**Q20.** $3x - 2 \leq 4, x \in R$	**Q21.** $2x - 1 \geq -5, x \in R$
Q22. $2 - x < 4, x \in Z$	**Q23.** $4 - 3x \leq -2, x \in N$	**Q24.** $1 - 5x \geq -9, x \in R$

Set 3: Solve the following inequalities and show your solution on a number line:

Q25. $3x - 2 \leq 2x - 5, x \in R$	**Q26.** $4x - 5 < x + 7, x \in N$	**Q27.** $7x + 2 \geq 2x - 8, x \in Z$
Q28. $3x + 1 > 2x + 5, x \in N$	**Q29.** $5x + 7 \leq 3x - 1, x \in Z$	**Q30.** $2x + 5 > 4x - 7, x \in R$
Q31. $4(x - 2) < 3x - 4, x \in R$	**Q32.** $8x - 1 \leq 5(x - 2), x \in R$	**Q33.** $6(x - 1) > 3(2 + x), x \in N$
Q34. $3x + 5(2x - 4) \leq 2(x + 3), x \in Z$		**Q35.** $2(x + 1) - 4(x - 4) < 5 - (4x - 3), x \in R$

Set 4: (H.L. Only) Solve the following inequalities and show your solution on a number line:

Q36. $\frac{x}{2} - 1 > x - \frac{1}{2}, x \in R$	**Q37.** $\frac{3x}{2} - \frac{11}{2} \leq \frac{1}{2}, x \in N$	**Q38.** $4x - \frac{1}{2} \geq \frac{5x}{2} - 5, x \in Z$
Q39. $\frac{1}{3} - 2x < \frac{25}{3}, x \in Z$	**Q40.** $\frac{1}{2} - x \geq \frac{x}{4} - 2, x \in N$	**Q41.** $\frac{1}{2} - \frac{x}{3} < 1, x \in R$

Inequalities Revision Sheet Answers

Set 1:

Q1. $x \leq 4, x \in N$

Q2. $x < 3, x \in N$

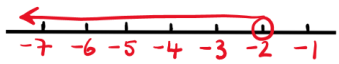
Q3. $x \geq -1, x \in N$

Q4. $x < 1, x \in Z$

Q5. $x > -4, x \in Z$

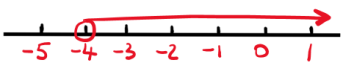
Q6. $x \leq -3, x \in Z$

Q7. $x < -2, x \in R$



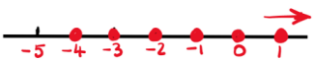
Q8. $x \geq 2, x \in R$

Q9. $x > -4, x \in R$

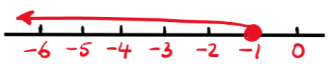


Q10. $x > 2, x \in N$

Q11. $x \geq -4, x \in Z$

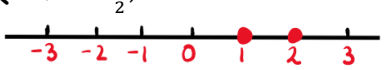


Q12. $x \leq -1, x \in R$

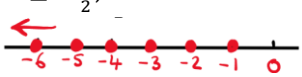


Q13. $x > \frac{1}{2}, x \in R$

Q14. $x < \frac{5}{2}, x \in N$



Q15. $x \leq -\frac{1}{2}, x \in Z$

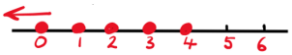


Set 2:

Q16. $x \leq 4, x \in N$

Q17. $x \geq 3, x \in N$

Q18. $x < 5, x \in Z$



Q19. $x > -3, x \in Z$

Q20. $x \leq 2, x \in R$

Q21. $x \geq -2, x \in R$

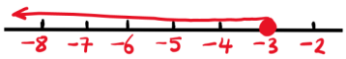
Q22. $x > -2, x \in Z$

Q23. $x \geq 2, x \in N$

Q24. $x \leq 2, x \in R$

Set 3:

Q25. $x \leq -3, x \in R$



Q26. $x < 4, x \in N$

Q27. $x \geq -2, x \in Z$

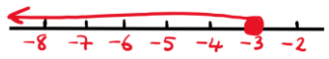
Q28. $x > 6, x \in N$

Q29. $x \leq -4, x \in Z$

Q30. $x < 6, x \in R$

Q31. $x < 4, x \in R$

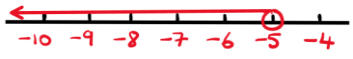
Q32. $x \leq -3, x \in R$



Q33. $x > 4, x \in N$

Q34. $x \leq 2, x \in Z$

Q35. $x < -5, x \in R$



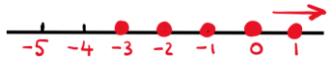
Set 4:

Q36. $x < -1, x \in R$

Q37. $x \leq 4, x \in N$

Q38. $x \leq 9, x \in Z$

Q39. $x > -4, x \in Z$



Q40. $x \leq 2, x \in N$

Q41. $x > -\frac{3}{2}, x \in R$