Inequalities

GCSE Mathematics • **Higher Tier** • Grades 6–7 • Non-calculator

Name: _____ Class: _____ Total: _____ / 54

Show all your working. Marks are given for correct method as well as the final answer.

1. Write down the meaning of $x > 3$. **[1 mark]**

Answer: _____

2. Write down the meaning of $x \leq -2$. **[1 mark]**

Answer: _____

3. Solve $x + 5 > 9$. **[2 marks]**

Answer: _____

4. Solve $3x \leq 21$. **[2 marks]**

Answer: _____

5. Solve $2x - 3 \geq 7$. **[2 marks]**

Answer: _____

6. Solve $4x + 1 < 13$. **[2 marks]**

Answer: _____

7. Solve $-2x > 8$. **[3 marks]**

Answer: _____

8. Solve $5 - x \leq 2$. **[3 marks]**

Answer: _____

9. Solve $3 - 2x > 11$. **[3 marks]**

Answer: _____

10. Solve $3(x + 2) < 18$. **[3 marks]**

Answer: _____

11. Solve $5x - 2 \geq 2x + 7$. **[3 marks]**

Answer: _____

12. Solve $4 < 2x \leq 10$. **[3 marks]**

Answer: _____

13. Solve $-3 \leq x + 2 < 5$. **[3 marks]**

Answer: _____

14. Solve $1 < 3x - 5 \leq 13$. **[4 marks]**

Answer: _____

15. List the integers that satisfy $-2 < x \leq 3$. **[2 marks]**

Answer: _____

16. List the integers that satisfy $1 \leq x < 6$. **[2 marks]**

Answer: _____

17. n is an integer and $2n + 1 < 15$. Write down the largest possible value of n. **[3 marks]**

Answer: _____

18. Describe how you show $x \geq 4$ on a number line. **[2 marks]**

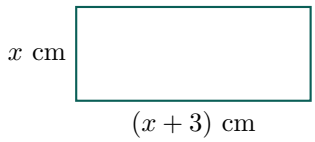


Answer: _____

19. Solve $x^2 < 25$. **[3 marks]**

Answer: _____

20. A rectangle has width x cm and length $(x + 3)$ cm. Its perimeter is less than 26 cm.



(a) Form an inequality in x and solve it. **[4 marks]**

(b) Given x is a positive integer, list the possible widths. **[3 marks]**

Answer: _____

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