

SOLVING LINEAR INEQUALITIES WITH UNKNOWN ON BOTH SIDES – ANSWERS

Year Group: 9, Ability: Higher, Tier: higher, Grade Range: 4-7, Exam Board: Edexcel,
Develop Topic: Solving Linear Inequalities With Unknowns On Both Sides, Question Count:
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ANSWERS

SPIRAL

1. $(x + 4)^2 - 21$

2. £5627.54

3. $\frac{1}{3}$

4. £560

DEVELOP

1. $x > -3$

2. $x \geq -1$

3. $y \geq 1.8$ (or $\frac{9}{5}$)

4. $x > 5$

5. $x \leq -6$

6. $x < -2$

7. $p \leq \frac{14}{3}$ (or $4\frac{2}{3}$)

8. $x > 3$

9. $x > -7$

10. $y \leq 1.2$ (or $\frac{6}{5}$)

11. $x \geq 3$

12. $x > 3$

13. $x \geq 8$

14. $x \geq 2.8$ (or $\frac{14}{5}$)

15. $y < 10$

16. $x < -2$

17. $p \leq \frac{22}{12}$ (or $\frac{11}{6}$)

18. $x < 4$

19. $x < 6$

20. $x \leq \frac{7}{3}$ (or $2\frac{1}{3}$)

21. $x \leq -4$

22. $y > 2$

23. $x > 5.4$ (or $\frac{27}{5}$)

24. $x \leq 1$

25. $y \leq -14$

26. $x < -3$

27. $x > \frac{11}{3}$ (or $3\frac{2}{3}$)

28. $x \leq 0.6$ (or $\frac{3}{5}$)

29. $x \geq 9$

30. $x > -\frac{2}{3}$

31. $x \leq 13$

32. $y > 6$

33. $x \geq 4$

34. $x > \frac{17}{7}$ (or $2\frac{3}{7}$)

$$35. \left(x \leq \frac{19}{7} \right) \text{ (or } \left(2.\overline{714285} \right))$$

$$37. \left(x \leq 11 \right)$$

$$39. \left(x \geq \frac{23}{6} \right) \text{ (or } \left(3.83 \overline{3} \right))$$

$$36. \left(x > 9 \right)$$

$$38. \left(x < \frac{12}{5} \right) \text{ (or } \left(2.4 \right))$$

$$40. \left(x \geq -18 \right)$$

APPLY

1. Shop B is cheaper. Inequality: $\left(8n \geq 40 \Rightarrow n \geq 5 \right)$. Cost comparison: Shop A = £32, Shop B = £30.

2. Width $\left(\geq 11 \right)$ cm.