MATHS

BOOKS - ICSE

INEQUALITIES

Solved Examples

1. Write the inequality obtained in each of the following cases : On adding 5 to each side of $4 > 2,$

2. Write the inequality obtained in each of the following cases : On subtracting 7 from each side of $11 < 21$,

3. Write the inequality obtained in each of the following cases : On multiplying each side of $5 > 1$ by 4,

4. Write the inequality obtained in each of the following cases : On multiplying each side of $1 < 3$ by -3,

5. Write the inequality obtained in each of the following cases : On dividing each side of $20 > 8$ by 4,

6. Write the inequality obtained in each of the following cases : On dividing each side of $14 < 21$ by -7,

7. Write the inequality obtained in each of the following cases : On taking the reciprocal of each side of $3 > 5$.

8. Find the solution set of $2x - 7 < 8, x \in N$.

Represent the solution set on the number line.

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9. Solve the inequality $5 - 3x < 17, x \in Z$.

Represent the solution set on the number line.

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10. Find the solution set of

$23 - 7x < 0, x \in Z$. Represent the solution

set on the number line.

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11. Solve the inequality

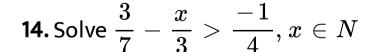$10 - 3x < x - 17, x \in \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

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12. Solve $12 + 3(4x - 3) > x - 23$, where $x \in Z^-$

13. Solve $7 < 11 - 4x < 2x + 18, x \in Z$

14. Solve $\dfrac{3}{7} - \dfrac{x}{3} > \dfrac{-1}{4}, x \in N$

15. Solve $3 - \dfrac{x}{4} < 2x - 9 < 12 - \dfrac{x}{2}, \; x \in Z$

1. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $2x > 5$

2. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $3x - 8 < 1$

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3. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $3 - 12x > -21$

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4. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $7 - x > 0$

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5. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $3 - 4x > -2$

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6. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $3x + 4 < 15$

7. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $\dfrac{3}{4}x > -1$

8. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $\dfrac{2}{3} + x < -\dfrac{1}{6}$

9. If $x \in \{-2, -1, 0, 1, 2, 3, 4, 5\}$, find the solution set of each of the following inequations : $\dfrac{7}{4} - 3x < \dfrac{5}{6}$

10. If $x \in N$, find the solution set of each of the following inequations : $4x < 13$

11. If $x \in N$, find the solution set of each of the following inequations : $2x - 9 < -1$

12. If $x \in N$, find the solution set of each of the following inequations : $3 - x < -2$

13. If $x \in N$, find the solution set of each of the following inequations : $5 - 7x > -16$

14. If $x \in N$, find the solution set of each of the following inequations : $\dfrac{4}{7} - \dfrac{x}{4} > -2$

15. If $x \in N$, find the solution set of each of the following inequations : $-\dfrac{1}{2} > \dfrac{1}{4} - \dfrac{x}{3}$

16. If $\xi n Z^+$, find the solution set of each of the following inequations : $7x < 17$

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17. If $\xi n Z^+$, find the solution set of each of the following inequations : $4x - 11 < 5$

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18. If $\xi n Z^+$, find the solution set of each of the following inequations : $8 - x > \dfrac{1}{3}$

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19. If $\xi n Z^+$, find the solution set of each of the following inequations : $4(x + 5) < 29$

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20. If $\xi n Z^+$, find the solution set of each of the following inequations : $5 > \dfrac{2}{3}x$

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21. If $\xi n Z^+$, find the solution set of each of the following inequations : $2 - \dfrac{7x}{29} < \dfrac{5}{3}$

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22. If $x \in Z^-$, find the solution set of each of the following inequations : $3x > -12$

23. If $x \in Z^-$, find the solution set of each of the following inequations : $-29 < 9x - 2$

24. If $x \in Z^-$, find the solution set of each of the following inequations : $4(x + 5) < 9$

25. If $x \in Z^-$, find the solution set of each of the following inequations : $5 + 6x > x - 10$

26. If $x \in Z^-$, find the solution set of each of the following inequations :

$10 - 2(1 + 4x) < 26$

27. If $x \in Z^-$, find the solution set of each of the following inequations : $\dfrac{1}{3} > \dfrac{6}{7}x + 4$

28. Find the solution set of each of the following inequations : $2 < x - 3 < 7, x \in N$

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29. Find the solution set of each of the following inequations :

$10 < 4x - 5 < 21, x \in N$

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30. Find the solution set of each of the following inequations :

$$2 - x < 4x - 7 < 11 - 2x, \ x \in Z$$

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31. Find the solution set of each of the following inequations :

$$4 - 2x < 3x + 19 < 42 - 5x, \ x \in Z$$

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32. Find the solution set of each of the following inequations :

$$-5 < \frac{x}{2} - 3 < \frac{5}{2}, \, x \in Z$$

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33. Find the solution set of each of the following inequations :

$$9 - \frac{2}{3}x < 5x - 11 < 17 - \frac{x}{4}, \, x \in Z$$

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