

Solve each compound inequality. Except for the empty set, express the solution set in interval notation:

Random Seed: 451757

- |  |  |                                 |
|--|--|---------------------------------|
| 1. $x \geq 12$ and $x > -6$                  | 31. $x \leq -6$ or $x < -2$                | 61. $-1 \leq x < 3$             |
| 2. $x > -19$ and $x < 7$                     | 32. $x \leq 7$ or $x < -4$                 | 62. $-7 \leq x < -3$            |
| 3. $x > 7$ and $x < -5$                      | 33. $x \geq -5$ or $x > -8$                | 63. $-9 \leq x < 6$             |
| 4. $x \geq 18$ and $x \leq -6$               | 34. $x < -6$ or $x < -5$                   | 64. $5 \leq x \leq 10$          |
| 5. $x \geq 6$ and $x < 15$                   | 35. $x \leq 15$ or $x \geq 2$              | 65. $-2 < x < 10$               |
| 6. $x > 14$ and $x < -11$                    | 36. $x \geq -11$ or $x < -4$               | 66. $-9 < x < -1$               |
| 7. $x > 12$ and $x < 8$                      | 37. $x > 8$ or $x < 1$                     | 67. $-10 < x \leq -3$           |
| 8. $x \leq -6$ and $x < -8$                  | 38. $x \geq -8$ or $x > 9$                 | 68. $-9 \leq x \leq 10$         |
| 9. $x < 11$ and $x < -14$                    | 39. $x \leq -14$ or $x \geq -5$            | 69. $-6 < x < 3$                |
| 10. $x \leq 1$ and $x > 5$                   | 40. $x \leq 5$ or $x \geq -7$              | 70. $2 \leq x \leq 5$           |
| 11. $x > 12$ and $x > 2$                     | 41. $x > 2$ or $x \geq -7$                 | 71. $-3 \leq x \leq 6$          |
| 12. $x > 18$ and $x > -16$                   | 42. $x \leq -16$ or $x \leq -6$            | 72. $4 < x \leq 11$             |
| 13. $x \leq -18$ and $x > -2$                | 43. $x \leq -2$ or $x > 8$                 | 73. $-7 < x < -5$               |
| 14. $x \leq 8$ and $x \geq 11$               | 44. $x \leq 11$ or $x > -2$                | 74. $7 \leq x < 11$             |
| 15. $x \geq 5$ and $x < 18$                  | 45. $x \geq 18$ or $x \leq 3$              | 75. $-3 < x < 8$                |
| 16. $x + 5 < 12$ and $-2x + 9 < -6$          | 46. $-9x + 12 \leq -6$ or $5x + 1 > -11$   | 76. $-6 \leq -11x - 9 < -3$     |
| 17. $-9x + 2 \leq -19$ and $-4x - 4 \leq 7$  | 47. $-5x - 19 \geq 7$ or $2x - 9 \leq -1$  | 77. $3 \leq -x - 5 < 11$        |
| 18. $2x - 7 < 7$ and $-8x - 2 > -5$          | 48. $5x + 7 < -5$ or $-7x + 2 > -11$       | 78. $-10 \leq -11x + 5 \leq 11$ |
| 19. $3x + 9 \geq 18$ and $-5x - 4 \leq -6$   | 49. $3x + 18 > -6$ or $9x + 3 < -10$       | 79. $-5 \leq -10x + 3 < 1$      |
| 20. $-9x + 7 \leq 6$ and $2x + 9 \leq 15$    | 50. $-2x + 6 > 15$ or $7x - 9 > -5$        | 80. $-11 < -5x - 2 \leq 11$     |
| 21. $-2x + 5 \leq 14$ and $-4x - 8 \geq -11$ | 51. $-8x + 14 \geq -11$ or $5x - 2 > -1$   | 81. $-11 \leq -x - 8 < 10$      |
| 22. $-4x - 8 \geq 12$ and $x + 4 < 8$        | 52. $x + 12 \leq 8$ or $-8x - 4 \geq 10$   | 82. $4 \leq 10x + 1 \leq 7$     |
| 23. $-4x - 9 \leq -6$ and $9x - 7 \leq -8$   | 53. $9x - 6 \leq -8$ or $-9x - 4 > 11$     | 83. $-3 \leq 11x + 9 \leq 4$    |
| 24. $-x - 2 \geq 11$ and $-5x - 9 \geq -14$  | 54. $x + 11 \geq -14$ or $-2x - 1 \leq -8$ | 84. $-9 \leq -8x + 1 \leq 1$    |
| 25. $-2x - 7 \leq 1$ and $-7x - 5 \geq 5$    | 55. $-5x + 1 < 5$ or $-7x - 2 < -10$       | 85. $2 \leq -10x - 5 < 5$       |
| 26. $7x - 5 < 12$ and $-7x - 4 < 2$          | 56. $-5x + 12 > 2$ or $-5x + 7 \geq 8$     | 86. $-7 \leq 8x - 5 < 2$        |
| 27. $-3x - 2 > 18$ and $-6x - 4 > -16$       | 57. $-5x + 18 \leq -16$ or $-2x - 3 < 2$   | 87. $-2 < 2x - 5 < 5$           |
| 28. $6x - 2 < -18$ and $8x - 5 > -2$         | 58. $-4x - 18 < -2$ or $-2x + 6 \geq 1$    | 88. $-10 \leq x - 4 < -4$       |
| 29. $6x + 5 \geq 8$ and $-2x + 8 \leq 11$    | 59. $-11x + 8 < 11$ or $5x + 6 \leq 8$     | 89. $-6 \leq 8x - 11 \leq 6$    |
| 30. $4x - 5 > 5$ and $3x + 9 \leq 18$        | 60. $-3x + 5 > 18$ or $-5x + 4 \leq 2$     | 90. $1 \leq 2x - 3 < 3$         |

1.  $[12, \infty)$
2.  $(-19, 7)$
3.  $\emptyset$
4.  $\emptyset$
5.  $[6, 15)$
6.  $\emptyset$
7.  $\emptyset$
8.  $(-\infty, -8)$
9.  $(-\infty, -14)$
10.  $\emptyset$
11.  $(12, \infty)$
12.  $(18, \infty)$
13.  $\emptyset$
14.  $\emptyset$
15.  $[5, 18)$
16.  $\emptyset$
17.  $[7/3, \infty)$
18.  $(-\infty, 3/8)$
19.  $[3, \infty)$
20.  $[1/9, 3]$
21.  $[-9/2, 3/4]$
22.  $(-\infty, -5]$
23.  $[-3/4, -1/9]$
24.  $(-\infty, -13]$
25.  $[-4, -10/7]$
26.  $(-6/7, 17/7)$
27.  $(-\infty, -20/3)$
28.  $\emptyset$
29.  $[1/2, \infty)$
30.  $(5/2, 3]$
31.  $(-\infty, -2)$
32.  $(-\infty, 7]$
33.  $(-8, \infty)$
34.  $(-\infty, -5)$
35.  $(-\infty, \infty)$
36.  $(-\infty, \infty)$
37.  $(-\infty, 1) \cup (8, \infty)$
38.  $[-8, \infty)$
39.  $(-\infty, -14] \cup [-5, \infty)$
40.  $(-\infty, \infty)$
41.  $[-7, \infty)$
42.  $(-\infty, -6]$
43.  $(-\infty, -2] \cup (8, \infty)$
44.  $(-\infty, \infty)$
45.  $(-\infty, 3] \cup [18, \infty)$
46.  $(-12/5, \infty)$
47.  $(-\infty, 4]$
48.  $(-\infty, 13/7)$
49.  $(-\infty, \infty)$
50.  $(-\infty, -9/2) \cup (4/7, \infty)$
51.  $(-\infty, \infty)$
52.  $(-\infty, -7/4]$
53.  $(-\infty, -2/9]$
54.  $[-25, \infty)$
55.  $(-4/5, \infty)$
56.  $(-\infty, 2)$
57.  $(-5/2, \infty)$
58.  $(-\infty, \infty)$
59.  $(-\infty, \infty)$
60.  $(-\infty, -13/3) \cup [2/5, \infty)$
61.  $[-1, 3)$
62.  $[-7, -3)$
63.  $[-9, 6)$
64.  $[5, 10]$
65.  $(-2, 10)$
66.  $(-9, -1)$
67.  $(-10, -3]$
68.  $[-9, 10]$
69.  $(-6, 3)$
70.  $[2, 5]$
71.  $[-3, 6]$
72.  $(4, 11]$
73.  $(-7, -5)$
74.  $[7, 11)$
75.  $(-3, 8)$
76.  $(-6/11, -3/11]$
77.  $(-16, -8]$
78.  $[-6/11, 15/11]$
79.  $(1/5, 4/5]$
80.  $[-13/5, 9/5)$
81.  $(-18, 3]$
82.  $[3/10, 3/5]$
83.  $[-12/11, -5/11]$
84.  $[0, 5/4]$
85.  $(-1, -7/10]$
86.  $[-1/4, 7/8)$
87.  $(3/2, 5)$
88.  $[-6, 0)$
89.  $[5/8, 17/8]$
90.  $[2, 3)$