



# Math Worksheet for 7th Grade

## Two-step inequalities

Name: \_\_\_\_\_

Due Date: \_\_\_\_\_

Teacher: \_\_\_\_\_

Parent Sign: \_\_\_\_\_

2.  $5 + 2x \geq 13$
3.  $(x/4) - 3 \geq 1$
4.  $7 - 2x < 13$
5.  $-3x + 5 \geq -10$
6.  $(\frac{2}{3})x - 1 < 5$
7.  $-(x/5) + 6 \geq 8$
8.  $4(x - 2) \geq 12$
9.  $(\frac{1}{2})x + 7 > 11$
10.  $-6 + 3x \geq 9$
11.  $8 - (x/2) < 3$
12.  $9x - 18 > 0$
13.  $-4 + (x/3) \geq 2$
14.  $5(x + 1) < 25$
15.  $(\frac{3}{2})x - 4 \geq 2$
16.  $-2(x - 5) > 6$
17.  $0.5x + 2 \geq 6$
18.  $-0.25x - 1 < 3$
19.  $6 + 0.2x \geq 8$
20.  $(x/6) + 4 \geq 5$

Apple word problems (set up and solve a two-step inequality)

21. Maria had  $x$  apples. She bought 7 more and then gave 4 to a friend. Now she has more than 20 apples. Write and solve an inequality for  $x$ .
22. Jason started with  $x$  apples. After losing 3 and then buying 10 more, he had at least 18 apples. Find the smallest whole number  $x$  that works.
23. A bushel contains  $x$  apples. After removing 6 apples, there are fewer than 30 apples left. Write and solve an inequality for  $x$ .
24. Lina had  $x$  apples. She split them into two equal piles and then ate 2 apples from one pile; that pile now has at most 10 apples. Write and solve an inequality for  $x$  (assume  $x$  is even).
25. A shop had  $x$  apples. After selling 8 they had at least 50 apples remaining. What is the smallest  $x$ ?
26. Ben picks  $x$  apples. He puts them into baskets of 4; after filling baskets he still has more than 3 apples leftover. Write an inequality and solve for possible  $x$  values ( $x$  is a whole number).
27. Zoe starts with  $x$  apples. She gives half of them to a friend and then buys 6 more, ending with at least 15 apples. Solve for  $x$ .



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28. A teacher buys  $x$  apples. She uses 12 for a snack and then divides the rest equally among 3 groups; each group receives no more than 8 apples. Write and solve an inequality for  $x$ .
29. A crate holds  $x$  apples. After removing 9 apples, the crate has fewer than 40 apples. What possible integer values could  $x$  be?
30. A farmer had  $x$  apples. He sold 10 and then harvested 30 more, ending with at least 100 apples. Find the minimum  $x$ .
31. A party planner has  $x$  apples. She uses 3 apples per fruit bowl for 8 bowls, and then wants at least 5 apples left. Write and solve an inequality for  $x$ .
32. Paul had  $x$  apples. He gave away  $\frac{1}{3}$  of them and then had at least 12 apples left. Write and solve an inequality for  $x$  (assume  $x$  divisible by 3).
33. An apple crate weighed  $x$  pounds. After removing a 4-pound bag, the weight was more than 50 pounds. Solve for  $x$ .
34. A grocery store orders  $x$  apples. After selling 23 apples, they still have at least 100 apples. Find smallest  $x$ .
35. A baker uses 2 apples for each pie and made 12 pies, then wanted at least 10 apples left. Write and solve an inequality for the number  $x$  of apples they started with.
- R&B word problems (set up and solve a two-step inequality – R&B = an R&B concert/playlist context)
36. A DJ has  $x$  R&B tracks. He adds 12 new tracks and then removes 3 duplicates; now he has more than 50 tracks. Write and solve an inequality for  $x$ .
37. A radio station needs at least 200 R&B minutes for a show. They have  $x$  minutes, then add 30 minutes and remove 5 for ads, and still need at least 200 minutes. Write and solve an inequality for  $x$ .
38. An R&B concert sold  $x$  tickets in advance. After selling 40 more at the door, total sales were less than 500. Find the largest possible  $x$ .
39. A playlist had  $x$  R&B songs. After removing  $\frac{1}{4}$  of the songs and adding 10 new ones, the playlist had at least 40 songs. Write and solve an inequality for  $x$  (assume  $x$  divisible by 4).
40. A band needed  $x$  R&B instruments. They bought 8 sets and returned 2 broken sets; after that they had at least 20 usable sets. Find the smallest  $x$ .
41. A promoter charged  $x$  dollars per R&B concert ticket. After adding a \$5 service fee and selling the ticket for at most \$30, what inequalities must  $x$  satisfy? Solve for  $x$ .
42. A streaming service had  $x$  plays of R&B songs. After gaining 60 plays and losing 15 plays due to a glitch, they had more than 100 plays. Find  $x$ .
43. An R&B group rehearses  $x$  minutes per day. They cut rehearsal by 20 minutes on one day and then added 45 minutes of extra practice and reached at least 90 minutes that day. Solve for  $x$ .
44. A music store had  $x$  R&B CDs. After selling 14 and receiving a shipment of 20, the store had no more than 80 CDs. Find possible  $x$ .
45. The R&B stage requires  $x$  light fixtures. After installing 6 and removing 1 broken fixture, there are at least 25 working fixtures. Solve for  $x$ .
46. A DJ rented  $x$  speakers for an R&B event. He returned 2 and then rented 5 more, ending with fewer than 12 speakers. Find  $x$ .



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47. A radio host plays R&B for  $x$  minutes. She then increases playtime by 10
48. An R&B festival needed  $x$  volunteers. After recruiting 18 and then losing 4, the count was at least 60 volunteers. What is the smallest  $x$ ?
49. A band sells merchandise at  $x$  dollars each. After applying a \$3 handling fee the price is at most \$25. Solve for  $x$ .
50. For an R&B remix, the producer starts with  $x$  beats per minute (bpm), reduces tempo by 10 bpm, then increases by 8 bpm and wants the final bpm to be greater than 110. Write and solve the inequality for  $x$ .