Name: Due Date: Teacher: Parent Sign:

Two-step inequalities (simple)

1. Solve: $2x + 3 < 11$

2. Solve: $3x - 4 > 8$

3. Solve: $-2x + 5 \geq 13$

4. Solve: $4x + 6 \leq 22$

5. Solve: $5x - 10 < 15$

6. Solve: $6x + 2 > 20$

7. Solve: $-3x - 3 \geq -12$

8. Solve: $(\frac{1}{2})x + 3 \leq 7$

9. Solve: $3x + 2 \geq 11$

10. Solve: $7x - 5 < 16$

11. Solve: $4x - 8 \geq 0$

12. Solve: $2x + 7 \leq 21$

13. Solve: $-4x + 9 < 1$

14. Solve: $9x - 3 > 33$

15. Solve: $8x + 4 \leq 36$

16. Solve: $5x - 2 \geq 13$

17. Solve: $2x - 9 < -1$

18. Solve: $3x + 5 \leq 14$

19. Solve: $-6x + 12 \geq 0$

20. Solve: $(\frac{x}{3}) + 4 > 8$

Two-step inequality word problems — apples

(For each, let x be the unknown asked for; set up and solve a two-step inequality.)

21. Mia buys x baskets with 3 apples each and already has 5 apples. She needs at least 20 apples. ($3x + 5 \geq 20$)

22. Sam buys x bags with 4 apples each and already has 6 apples. He wants fewer than 22 apples. ($4x + 6 < 22$)

23. Each apple basket holds 5 apples. After she buys x baskets and 2 extra apples, she wants no more than 27 apples. ($5x + 2 \leq 27$)

24. A harvest fills x crates of 6 apples each and there are 3 loose apples. The farmer wants at least 45 apples. ($6x + 3 \geq 45$)

25. Ben picks x apples each day for 3 days and already had 7 apples; he wants fewer than 40 apples. ($3x + 7 < 40$)

26. Each apple costs $2 and there is a $1 packaging fee. Tom can spend at most $15. How many apples x can he buy? ($2x + 1 \leq 15$)

27. Lucy has 2 boxes with x apples each and 4 loose apples. She wants more than 18 apples. ($2x + 4 > 18$)

28. She buys x bags holding 8 apples each and gives away 7 apples; she needs at least 25 apples left. (8x - 7   25)

29. Four trees each produce x apples and there are 10 extra apples; total must be less than 50. (4x + 10 < 50)

30. Apples are packed in crates of 9; with x crates plus 2 extra apples she wants at least 83 apples. (9x + 2   83)

31. She buys 3 packages; each package has x apples plus 4 bonus apples per package (3(x + 4)). She wants at least 30 apples total. (3(x + 4)   30)

32. Apples cost $3 each and there is a $2 fee. She can spend at most $20. (3x + 2   20)

33. Apples are put into x boxes of 7 apples, plus one extra box (7). She wants fewer than 49 apples. (7x + 7 < 49)

34. Each apple weighs 200 g and packaging is 100 g. The total must be at least 1000 g. How many apples x are needed? (200x + 100   1000)

35. He sells x crates of apples for $4 each and must cover a $5 expense; he needs total revenue at least $32. (4x - 5   27)

Two-step inequality word problems — R&B ($\frac{music}{shop}$/band contexts)

36. An R&B store charges $8 per CD and a $3 membership fee. The customer has at most $35. (8x + 3   35)

37. A club sells 50 tickets per R&B night and there are 20 extra guest passes. They want to sell more than 300 tickets: 50x + 20 > 300.

38. R&B T-shirts cost $12 each plus $2 shipping. The buyer can spend at most $50. (12x + 2   50)

39. Pressing albums costs $5 per album plus a $100 studio fee. Production must be under $300. (5x + 100 < 300)

40. An R&B radio block plays x songs per hour. In 3 hours plus 2 bonus songs they must have at least 20 songs. (3x + 2   20)

41. Each album sale gives 3 fan points. With x albums sold and 10 existing points, they want fewer than 50 points. (3x + 10 < 50)

42. Vinyls cost $15 each plus a $5 handling fee. A buyer spends at most $80. (15x + 5   80)

43. A promoter pays x dollars per band member for 4 members plus a $200 fee. The total pay must be at least $800. (4x + 200   800)

44. Equipment rental is $40 per day plus a $60 deposit. The band can pay at most $300. (40x + 60   300)

45. A playlist includes 18 songs of length x minutes each and there are 10 minutes of breaks. The playlist total must fit in 120 minutes. (18x + 10   120)

46. The R&B store has x boxes of 12 CDs plus 30 loose CDs; total must be less than 150 CDs. (12x + 30 < 150)

47. A package sells 3 bundles of x tracks plus 5 bonus tracks. The total must be at least 50 tracks. (3x + 5   50)

48. A DJ charges $25 per hour plus a $40 setup fee. The budget is at most $190. (25x + 40   190)

49. Record sleeves cost $0.50 each and shipping is $10. The cost must be at most $60. (0.5x + 10   60)

50. The band expects to sell 12 tickets per show and has already pre-sold 4 tickets. They want at least 100 tickets sold. How many shows x are needed? (12x + 4   100)