Name: _____ Date: _____

Two-Step Equations

Grade 7 • 36 questions • Part A: undo the + or − first, then the × or ÷. Fill in each step

1. 7x − 20 = 1 so 7x = ____ so x = ____

2. 8x − 7 = 17 so 8x = ____ so x = ____

3. 4x − 20 = 0 so 4x = ____ so x = ____

4. 6x − 3 = 45 so 6x = ____ so x = ____

5. 3x + 19 = 34 so 3x = ____ so x = ____

6. 3x + 2 = 8 so 3x = ____ so x = ____

Part B • Solve

7. x/6 − 25 = −15 x = _____

8. 5x + 7 = 62 x = _____

9. 8x + 16 = 96 x = _____

10. 7x − 17 = −10 x = _____

11. x/9 + 1 = 4 x = _____

12. 4x + 4 = 12 x = _____

13. 2x − 22 = −4 x = _____

14. 6x + 10 = 22 x = _____

15. x/5 + 5 = 11 x = _____

16. 2x − 14 = −2 x = _____

17. 6x + 25 = 97 x = _____

18. 3x + 12 = 39 x = _____

19. x/4 − 10 = −8 x = _____

20. 4x + 11 = 27 x = _____

Name: _____ Date: _____

Two-Step Equations

Part C • Negative numbers • Part D: brackets • Part E: stories

21. $4x - 12 = -48$ x = _____

22. $-7x - 2 = -16$ x = _____

23. $-4x - 7 = -11$ x = _____

24. $-7x - 1 = 48$ x = _____

25. $5x + 7 = -8$ x = _____

26. $-5x + 11 = -19$ x = _____

27. $6x + 13 = -17$ x = _____

28. $6x - 10 = -28$ x = _____

Part D • Divide both sides first, or multiply out the brackets

29. $3(x + 4) = 27$ x = _____

30. $5(x - 2) = 35$ x = _____

31. $2(x + 7) = 10$ x = _____

32. $4(x - 6) = -8$ x = _____

Part E • Write a two-step equation, then solve it

33. A taxi costs $3 plus $2 a mile. A ride cost $19. How many miles was it?

Answer: _____

34. A gym charges $25 to join and $15 a month. Lee paid $100. How many months?

Answer: _____

35. Three times a number, minus 7, is 26. What is the number?

Answer: _____

36. Ana has $40 and spends $6 a week. When will she have $4 left?

Answer: _____

Tip: undo in reverse order, like taking off shoes before socks. Then check by putting x back in.

Answer Key — Two-Step Equations

1. $7x = 21,\ x = 3$
2. $8x = 24,\ x = 3$
3. $4x = 20,\ x = 5$
4. $6x = 48,\ x = 8$
5. $3x = 15,\ x = 5$
6. $3x = 6,\ x = 2$
7. 60
8. 11
9. 10
10. 1
11. 27
12. 2
13. 9
14. 2
15. 30
16. 6
17. 12
18. 9
19. 8
20. 4
21. -9
22. 2
23. 1
24. -7
25. -3
26. 6
27. -5
28. -3
29. 5
30. 9
31. -2
32. 4
33. $3 + 2m = 19,\ m = 8$
34. $25 + 15m = 100,\ m = 5$
35. $3n - 7 = 26,\ n = 11$
36. $40 - 6w = 4,\ w = 6$ weeks