



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

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

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

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

## Math Worksheet for 8th Grade Equations with variables on both sides

Intro to equations with variables on both sides

1)  $x + 4 = 2x - 3$

2)  $3x + 1 = x + 9$

3)  $5 + x = 2 + 3x$

4)  $2x - 6 = x + 10$

5)  $4 + 2x = 3x - 5$

6)  $6x = 2x + 12$

7)  $x - 7 = 2x + 2$

8)  $7 + 3x = 4 + x$

9)  $8x - 4 = 4x + 12$

10)  $2 + 5x = 7x - 6$

11)  $9x - 3 = x + 21$

12)  $3 + x = x + 5$

13)  $10 - x = 4$

14)  $-2x + 5 = x - 7$

15)  $5x + 2 = 2 + 5x$

Equations like  $20 - 7x = 6x - 6$  (collecting x terms)

16)  $20 - 7x = 6x - 6$

17)  $18 - 5x = 4x - 7$

18)  $15 - 3x = 2x + 5$

19)  $12 - 4x = -2x + 8$

20)  $30 - 8x = 7x + 2$

21)  $14 - 6x = 3x - 1$

22)  $25 - 9x = -x + 10$

23)  $8 - x = 2x + 5$

24)  $22 - 2x = 6x + 6$

25)  $40 - 3x = x + 10$

26)  $7 - 4x = -5x + 9$

27)  $19 - x = 5x - 7$

28)  $6 - 7x = -6x + 1$

29)  $17 - 2x = -3x + 11$

30)  $21 - 5x = 4x - 14$

## Math Worksheet for 8th Grade

### Equations with variables on both sides

Equations with fractions (variables on both sides)

31)  $(\frac{1}{2})x + 3 = x - 1$

32)  $(\frac{2}{3})x + 4 = x + 1$

33)  $\frac{x}{4} + 2 = \frac{x}{2} + 1$

34)  $(\frac{3}{5})x - 1 = (\frac{1}{5})x + 3$

35)  $(\frac{1}{3})x + 2 = (\frac{1}{6})x + 5$

36)  $(\frac{5}{4})x - 3 = x + 1$

37)  $\frac{x}{2} + 7 = (\frac{3}{4})x + 4$

38)  $(\frac{4}{5})x + 1 = (\frac{2}{5})x + 6$

39)  $3 + (\frac{x}{3}) = 2 + (\frac{x}{6})$

40)  $(\frac{7}{8})x - 2 = (\frac{1}{8})x + 4$

Equations with the variable in the denominator

41)  $\frac{5}{x} = 1$

42)  $6/(x + 1) = 2$

43)  $3/(x - 2) = 1$

44)  $8/(2x) = 2$

45)  $\frac{4}{x} + 1 = 5$

46)  $2/(x + 3) + 1 = 3$

47)  $\frac{7}{x} - 2 = 3$

48)  $9/(x - 1) = 3$

49)  $10/(x + 2) = 5$

50)  $12/(3x - 3) = 4$