Mathematics: Substitutions Demo Demo - Set 1

Contents

Title Page	1
Addition and Subtraction	2
Addition and Subtraction with Brackets	3
Addition and Subtraction with Brackets II	4
Addition and Subtraction with Brackets III	5
Addition and Subtraction with Brackets IV	6
Expressions with Parentheses	7
Expressions with Parentheses II	9
Expressions with Parentheses III	10
Expressions with Parentheses IV	12
Expressions with Parentheses V	13
Expressions with Parentheses VI	14
Challenge	16
Test 1	18
Test 2	19
Test 3	20
Certificate	21
Solutions	22
Solutions: Test 1	24
Solutions: Test 2	25
Solutions: Test 3	26

Time: _____

1)	Simplify algebraic expression
	9x + 7x - 2x - 4x =
a) b) c)	Solve for $x = 1$
2)	Simplify algebraic expression
/	6x + 0x - x - 3x = 1
a) b) c)	Solve for $x = 4$
3)	Simplify algebraic expression
0)	Simplify algebraic expression $8x - 5x + 10x - 7x - 10x$
	5x - 5x + 10x - 1x - 1
a) b) c)	Solve for $x = 1$
4)	Simplify algebraic expression
/	6x + 4x + 0x - 6x =
a) b) c)	Solve for $x = 5$

Time: _

- 5) Simplify algebraic expression (10+4x) - 7 + (8-1) - 5 =
- a) Solve for x = 2
- b) Solve for x = 1
- c) Solve for x = 3
- 6) Simplify algebraic expression (8-2+8x) - (3-1+4x) =
- a) Solve for x = 4
- b) Solve for x = 0
- c) Solve for x = 2
- 7) Simplify algebraic expression (2x+6+6x+7x-4x)-6x =
- a) Solve for x = 2
- b) Solve for x = 0
- c) Solve for x = 1
- 8) Simplify algebraic expression (10x - x + 8) - (6 - 3 + 3) =
- a) Solve for x = 0
- b) Solve for x = 1
- c) Solve for x = 2

MATHEMATICS: SUBSTITUTIONS DEMO (D-1)	Name:	
ADDITION AND SUBTRACTION WITH BRACKETS II		
	Time:	Score:

9) Simplify algebraic expression

$$6x + 8x - 9x + ((4y - 0y) + 10y) =$$

a) Solve for
$$x = 0$$
, $y = 1$

b) Solve for
$$x = 1$$
, $y = 1$

c) Solve for
$$x = 3$$
, $y = 0$

10) Simplify algebraic expression

$$((5x - x) + 5y + 4y + x - 0x) =$$

a) Solve for
$$x = 2$$
, $y = 0$

b) Solve for
$$x = 4$$
, $y = 0$

c) Solve for
$$x = 0$$
, $y = 1$

11) Simplify algebraic expression ((9x - 8x + 2x) + 6y) + 9y - 9y =

a) Solve for x = 0, y = 3b) Solve for x = 0, y = 0

b) Solve for
$$x = 0$$
, $y = 0$

c) Solve for
$$x = 4$$
, $y = 0$

12) Simplify algebraic expression

$$(10x - 6x) + ((4x + 8y) - 6y) + x =$$

a) Solve for x = 1, y = 2

b) Solve for
$$x = 0$$
, $y = 10$

c) Solve for
$$x = 0$$
, $y = 7$

Score: ____

MATHEMATICS: SUBSTITUTIONS DEMO (D-1)	Name:		
ADDITION AND SUBTRACTION WITH BRACKETS	III		
	Time	Score:	/

- b) Solve for x = 2, y = 1
- c) Solve for x = 1, y = 0

16) Simplify algebraic expression ((4z + 3z - 4z)) + ((x - 0z) + 8y) =

- a) Solve for z = 0, x = 8, y = 0
- b) Solve for z = 0, x = 6, y = 1
- c) Solve for z = 0, x = 1, y = 1

MATHEMATICS: SUBSTITUTIONS DEMO (D-1)	Name:	
ADDITION AND SUBTRACTION WITH BRAC	CKETS IV	
	Time:	Score: /

17) Simplify algebraic expression (5 + (-8)) + (9x + y) + (-15) + (-2) =

- a) Solve for x = 1, y = 9
- b) Solve for x = 3, y = 4
- c) Solve for x = 3, y = 0

18) Simplify algebraic expression

$$(6-18) + (-5y) + (7x - (-9y)) - (-4) =$$

- a) Solve for x = 1, y = 1
- b) Solve for x = 1, y = 2
- c) Solve for x = 0, y = 4

19) Simplify algebraic expression (4+10x-2x) - (-5y) - 8 + 3y =

- a) Solve for x = 0, y = 2
- b) Solve for x = 2, y = 0
- c) Solve for x = 0, y = 3

20) Simplify algebraic expression 4y - (-3) + (1 - (-5y)) - (19 - 7x) =

- a) Solve for x = 0, y = 2
- b) Solve for x = 4, y = 0
- c) Solve for x = 3, y = 0

21) Simplify algebraic expression $(4x - 4x) + 0 \div ((x + 0x \div (10x))) =$ Solve for x = 10a) b) Solve for x = 7c) Solve for x = 322) Simplify algebraic expression $(4x - 3x) + 5x \times (0 \div 8 \times 7x) =$ a) Solve for x = 7b) Solve for x = 3c) Solve for x = 523) Simplify algebraic expression $(7x \times 5) - 28x - (14x \div 7) - 2x =$ a) Solve for x = 1b) Solve for x = 0Solve for x = 3c) 24) Simplify algebraic expression $(2x \times 8) \times (9x - 9x) \div (7x) \div (9x) =$ Solve for x = 1a) b) Solve for x = 7

c) Solve for x = 5

25) Simplify algebraic expression

$$(3x + x) - (0x - 0x) \div (4x) \div (2x) =$$

a) Solve for $x = 1$
b) Solve for $x = 0$
c) Solve for $x = 2$
26) Simplify algebraic expression
 $(0x - 0x \div (5x)) \div x \times 14x \div 7 =$

a) Solve for $x = 1$
b) Solve for $x = 6$
c) Solve for $x = 0$
27) Simplify algebraic expression
 $(0 \div 7) + (2x \div 2 \times 0x) - 0x =$

a) Solve for $x = 10$
b) Solve for $x = 2$
28) Simplify algebraic expression
 $(9x - x) \times 0x \div ((6x - 6x) + 5x) =$

a) Solve for $x = 10$
b) Solve for $x = 10$
c) Solve for $x = 2$

.

Time: ____



- b) Solve for x = 2
- c) Solve for x = 6

Score: ____ /___



c) Solve for x = 1

37) Simplify algebraic expression $(3 \times 0x) \times 56x \div 9 \div 35 \times 3x =$ Solve for x = 8a) b) Solve for x = 5c) Solve for x = 438) Simplify algebraic expression $19 + (-9x) + (0x \times x) \div (-6x) \div (-6) =$ a) Solve for x = 3b) Solve for x = 1c) Solve for x = 239) Simplify algebraic expression $2x \times 7 \times (9x + (-10)) \times 0x \div 10 =$ a) Solve for x = 5_____ b) Solve for x = 10_____ Solve for x = 3**C**) 40) Simplify algebraic expression $(2x + (-1x)) \times (-2) \div x \times (-7) - 4x =$ a) Solve for x = 4b) Solve for x = 5Solve for x = 6C)

Score: ____ /___

41) Simplify algebraic expression $10x + 0x \times (x + 7y) \times 3y \times 1 =$

- a) Solve for x = 1, y = 1_____
- b) Solve for x = 1, y = 7
- c) Solve for x = 1, y = 10
- 42) Simplify algebraic expression $(3x \times 7) - x - (9x - 0y) - 3x =$
- a) Solve for x = 1, y = 3
- _____ b) Solve for x = 1, y = 6
- c) Solve for x = 1, y = 10

43) Simplify algebraic expression $(3y - y + 2x) + 0y \times 9y \div (12x) =$

- a) Solve for x = 0, y = 1
- b) Solve for x = 0, y = 5
- c) Solve for x = 0, y = 2

44) Simplify algebraic expression $10y + 3y - (7y - 0y \times 9y) - 3y =$

- a) Solve for y = 1
- b) Solve for y = 2
- Solve for y = 3

Score: ____ /___

45) Simplify algebraic expression

$$(9 \times 7) \times (9z - 9z) + 6y - 5y =$$

a) Solve for
$$z = 5$$
, $y = 5$
b) Solve for $z = 2$, $y = 7$

c) Solve for
$$z = 2$$
, $y = 7$
c) Solve for $z = 4$, $y = 7$

46) Simplify algebraic expression

$$7z - 0z \div ((3x + 3x)) \div ((8y - 6y)) =$$

a) Solve for
$$z = 1$$
, $x = 7$, $y = 9$

b) Solve for
$$z = 1$$
, $x = 7$, $y = 6$

c) Solve for
$$z = 1$$
, $x = 8$, $y = 4$

47) Simplify algebraic expression $(0z - 0x + 10) - (8x \div 2) \div (2x) =$

- a) Solve for z = 2, x = 0
- b) Solve for z = 1, x = 1

c) Solve for
$$z = 10$$
, $x = 7$

48) Simplify algebraic expression

$$0x \times 1 \times (10z \div 1 - 3z) + 2x =$$

- a) Solve for z = 10, x = 5
- b) Solve for z = 6, x = 2
- c) Solve for z = 0, x = 4

Score: ____ /___

49) Simplify algebraic expression $(0x \times 8 + 0x) \times 5 \div 1 \div (6y) =$

- a) Solve for x = 4, y = 9
- b) Solve for x = 1, y = 0
- c) Solve for x = 0, y = 10
- 50) Simplify algebraic expression $(10x \times 0x \div 2) + 0 \div 14 \div 2 =$
- a) Solve for x = 8
- b) Solve for x = 4
- c) Solve for x = 7
- 51) Simplify algebraic expression $(0 \div 8 \times 1) \div ((21y \div (-3))) \div 5 =$
- a) Solve for y = 7
- b) Solve for y = 5
- c) Solve for y = 4
- 52) Simplify algebraic expression $9y \div (-9) \div ((9y - (-1y)) \div ((10 - 0y))) =$
- a) Solve for y = 0
- b) Solve for y = 8
- c) Solve for y = 7

Score: ____ /___

53) Simplify algebraic expression
$$(9 \times 2) \times (0 \div (-3)) \div (8 \times (-8y)) =$$
a) Solve for $y = 8$
b) Solve for $y = 3$
c) Solve for $y = 10$ 54) Simplify algebraic expression
 $(3x + (-1x)) - 4 - (0 \div 4 + 4x) =$ a) Solve for $x = 3$
b) Solve for $x = 1$
c) Solve for $x = 2$ 55) Simplify algebraic expression
 $(0x \times 0x) - 8 - 2 + 27y \div 9 =$

- a) Solve for x = 4, y = 3
- b) Solve for x = 4, y = 0
- c) Solve for x = 5, y = 3

56) Simplify algebraic expression $7 + 0 \div (3 + 9x \div (3 \div 1)) =$

- a) Solve for x = 4
- b) Solve for x = 3
- c) Solve for x = 6

Score: ____ /___

57) Simplify algebraic expression

$$(((5z + (-2)) - (-2))) \div 1 + 0y \times ((7x - 5y + 1)) =$$

a) Solve for $z = 2$, $x = 4$, $y = 7$
b) Solve for $z = 2$, $x = 10$, $y = 6$
c) Solve for $z = 0$, $x = 4$, $y = 5$
58) Simplify algebraic expression
 $(((2x \div (-2) + (-2z))) \times 0y) \div y \times (-3) \times (10x + (-4z)) =$
a) Solve for $z = 6$, $x = 4$, $y = 3$
b) Solve for $z = 10$, $x = 7$, $y = 3$
c) Solve for $z = 7$, $x = 5$, $y = 0$
59) Simplify algebraic expression
 $(0y \times (-6)) \div 10 - (((3x \times 5) \div 5 - 5y)) - (-3z) =$
a) Solve for $z = 7$, $x = 10$, $y = 1$
b) Solve for $z = 7$, $x = 10$, $y = 1$
c) Solve for $z = 7$, $x = 10$, $y = 1$
60) Simplify algebraic expression
 $((10z + (-3z) + (7 + (-10) + 4y))) + (16y \div (-2) - (-9y)) =$

- a) Solve for z = 0, y = 0b) Solve for z = 1, y = 1c) Solve for z = 0, y = 2

Mathematics: Substitutions Demo - Set 1

Score: ____ /____

61) Simplify algebraic expression

$$((1y + (-8)) + 5z) + 18 - 5y + (7y - 9z - 1) =$$

a) Solve for $z = 4$, $y = 0$
b) Solve for $z = 8$, $y = 9$
c) Solve for $z = 8$, $y = 8$
62) Simplify algebraic expression
 $((y \times (-7)) - (15 - 17 + 7) + (8 + 8 - 3)) =$
a) Solve for $y = 1$
c) Solve for $y = 2$
63) Simplify algebraic expression
 $(((0 + 0z \div 4) \div (-6y)) \div (-1y)) \times (((6x - 3) + 7z)) =$
a) Solve for $z = 8$, $x = 2$, $y = 4$
b) Solve for $z = 7$, $x = 0$, $y = 3$
c) Solve for $z = 4$, $x = 5$, $y = 4$
64) Simplify algebraic expression
 $(8 + x) - (7 + 9) + (((2z + (-10z) + 8z)) \div 1) =$
a) Solve for $z = 4$, $x = 0$
b) Solve for $z = 0$, $x = 8$

c) Solve for z = 4, x = 8

- a) Solve for z = 0, x = 8
- b) Solve for z = 0, x = 7
- Solve for z = 0, x = 2c)

1) Simplify algebraic expression

$$(3y - 0x) + 4x + (7y - 0x + 3y) =$$

a) Solve for $x = 2$, $y = 0$
b) Solve for $x = 0$, $y = 0$
c) Solve for $x = 1$, $y = 1$

2) Simplify algebraic expression
 $(0y - (-8x)) + (-6) + (0y + (-5x)) - 2 =$

a) Solve for $x = 6$, $y = 9$
b) Solve for $x = 4$, $y = 5$
c) Solve for $x = 1$, $y = 2$

3) Simplify algebraic expression
 $(1 \times 9y) \times 1 \div (2 \div (-2) - 2) =$

a) Solve for $y = 3$
b) Solve for $y = 1$

4) Simplify algebraic expression
 $(((4 \div 2) - 1) + 40x \div 8 - 10y + (-10) + 6) =$

a) Solve for $x = 8$, $y = 4$

- a) Solve for x = 8, y = 4b) Solve for x = 0, y = 0c) Solve for x = 6, y = 3

1) Simplify algebraic expression

$$((9x - 0y + x + 9x)) - (10x - 0x) =$$
a) Solve for $x = 0$, $y = 2$
b) Solve for $x = 0$, $y = 3$
c) Solve for $x = 2$, $y = 4$
2) Simplify algebraic expression
 $(5 + 8) + (-5) + (-1x) + 0 - 11 =$
a) Solve for $x = 8$
b) Solve for $x = 4$
c) Solve for $x = 10$
3) Simplify algebraic expression
 $(4 + (-4)) \div 10 \div ((9y + (-7y))) - 2x =$
a) Solve for $x = 3$, $y = 10$
b) Solve for $x = 3$, $y = 10$
c) Solve for $x = 3$, $y = 10$
d) Solve for $x = 3$, $y = 6$
4) Simplify algebraic expression
 $(((63 \div (-9)) - (-9)) + 2z - y \div 4 \times 0 \div 8) =$

- a) Solve for z = 3, y = 3b) Solve for z = 3, y = 10c) Solve for z = 3, y = 6

Achievement	ate is awarded to	ul completion of	ubstitutions Demo	g of the basic principles of Mathematics.	Parent or Guardian	To learn more visit Workulum.com	у у у у у у у у у у у у у у у у у у у
Certificate c	This certific	for success	Mathematics: S	and demonstrating an understandin	Presented on		

1	2	3	4
10x	2x	6x	4x
a) 10 b) 20	a) 8 b) 6	a) 6 b) 12	a) 20 b) 0
c) 0	c) 4	c) 18	c) 16
5	6	7	8
4x + 5 a) 13	4x + 4 a) 20	5x + 6 a) 16	9x + 2 a) 2
b) 9	b) 4	b) 6	b) 11
c) 17	c) 12	c) 11	c) 20
9	10	11	12
a) 14 $5x + 14y$	$ \begin{array}{c} 5x + 9y \\ a) 10 \end{array} $	$\begin{vmatrix} 3x + 6y \\ a \end{vmatrix} 18$	9x + 2y a) 13
b) 19 c) 15	b) 20 c) 9	b) 0 c) 12	b) 20 c) 14
13	14	15	16
10y+z	2x + 3y	x + 10y	x + 8y + 3z
a) 12	a) 7	a) 3	a) 8
c) 1	c) 20	c) 1	c) 9
17	18	19	20
9x + y - 20	7x + 4y - 8	8x + 8y - 4	7x + 9y - 15
a) -2 b) 11	a) 3 b) 7	a) 12 b) 12	a) 3 b) 13
c) 7	c) 8	c) 20	c) 6
21	22	23	24
$\begin{bmatrix} 0\\ a \end{bmatrix} 0$	$\begin{bmatrix} x \\ a \end{bmatrix} 7$	$\begin{vmatrix} 3x \\ a \end{vmatrix}$	
b) 0	b) 3	b) 0	b) 0
c) 0	c) 5	c) 9	c) 0
25	26	27	28
$\begin{array}{c} 4x \\ a \end{array} 4 \end{array}$	a) 0	a) 0	a) 0
b) 0 c) 8	$ \begin{array}{c} b) \\ c \end{array} 0 $	$ \begin{array}{c} b \\ c \\ 0 \end{array} $	$ \begin{array}{c} b) \\ c \end{array} 0 $
29	30	31	32
x + 7	3 <i>x</i>	3x + 3	x + 2
a) 7 b) 8	a) 6 b) 0	a) 6 b) 0	a) 2 b) 4
c) 9	c) 3	c) 3	c) 8
33	34	35	36
2x-4	5x-3	$\begin{vmatrix} 8x-7\\ 2 \end{vmatrix} 0$	$\begin{vmatrix} 3x-7\\ 2 \end{vmatrix} = 5$
b) 4	a) -3 b) 2	a) 9 b) 1	a) 0 b) -1
c) 9.45457e-125	c) 7	c) -7	c) -4

37	38	39	40
0 a) 0 b) 0 c) 0	$ \begin{array}{c} -9x + 19 \\ a) -8 \\ b) 10 \\ c) 1 \end{array} $	0 a) 0 b) 0 c) 0	-4x + 14 a) -2 b) -6 c) -10
41	42	43	44
10x a) 10 b) 10 c) 10	8x a) 8 b) 8 c) 8	2x + 2y a) 2 b) 10 c) 4	3y a) 3 b) 6 c) 9
45	46	47	48
y a) 5 b) 7 c) 7	7z a) 7 b) 7 c) 7	8 a) 8 b) 8 c) 8	2x a) 10 b) 4 c) 8
49	50	51	52
0 a) 0 b) 0 c) 0	0 a) 0 b) 0 c) 0	0 a) 0 b) 0 c) 0	-1 a) -1 b) -1 c) -1
53	54	55	56
0 a) 0 b) 0 c) 0	-2x - 4 a) -10 b) -6 c) -8	3y - 10 a) -1 b) -10 c) -1	7 a) 7 b) 7 c) 7
57	58	59	60
5z a) 10 b) 10 c) 0	0 a) 0 b) 0 c) 0	$ \begin{array}{c} -3x + 5y + 3z \\ a) -7 \\ b) 8 \\ c) -4 \end{array} $	5y + 7z - 3 a) -3 b) 9 c) 7
61	62	63	64
$ \begin{array}{c} 3y - 4z + 9 \\ a) -7 \\ b) 4 \\ c) 1 \end{array} $	$ \begin{array}{c} -7y + 8 \\ a) 8 \\ b) 1 \\ c) -6 \end{array} $	0 a) 0 b) 0 c) 0	x - 8 a) -8 b) 1.89091e-124 c) 1.89091e-124

1	2	3	4
13x + y	-15y + 10	4x - 7y + 14	-x + 20z - 1
a) 10	a) -5	a) 8	a) -9
b) 0	b) 10	b) -9	b) -8
c) 13	c) -20	c) 1.89091e-124	c) -3

1	2	3	4
$ \begin{array}{c} 4x + 13y \\ a) 8 \\ b) 0 \\ c) 17 \end{array} $	3x - 8 a) 10 b) 4 a) 5	-3y a) -9 b) 0	5x - 10y - 3 a) -3 b) -3 c) -3

1	2	3	4
9x	-x - 3	-2x	2z + 2
a) 0	a) -11	a) -6	a) 8
b) 0	b) -7	b) -6	b) 8
c) 18	c) -13	c) -6	c) 8