Determining Variable Value to Balance Equations

Name:

Find the value of x.

1) $5x + 58 = 2x + 70$

2) $-1x + 55 = 145 - 10x$

1. _____

2. _____

3. _____

3) $46 + 1x = -7x + 126$

4) $-2x + 55 = 100 - 11x$

4. _____

5. _____

6. _____

5) $4 + 2x = -2x + 44$

6) $114 + -3x = 194 + -11x$

7. _____

8. _____

9. _____

7) $4x - 12 = -2x + 36$

8) $-3x + 90 = 117 - 12x$

10. _____

11. _____

12. _____

9) $-2x + 90 = 125 + -7x$

10) $101 + -3x = -10x + 129$

11) $-1x + 46 = 116 - 11x$

12) $3x + 22 = 92 - 7x$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								
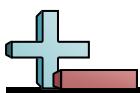
Find the value of x.

1) $5x + 58 = 2x + 70$

$$3x = 12$$
$$x = 4$$

2) $-1x + 55 = 145 - 10x$

$$9x = 90$$
$$x = 10$$

1. _____ **4**

2. _____ **10**

3. _____ **10**

3) $46 + 1x = -7x + 126$

$$8x = 80$$
$$x = 10$$

4) $-2x + 55 = 100 - 11x$

$$9x = 45$$
$$x = 5$$

4. _____ **5**

5. _____ **10**

6. _____ **10**

5) $4 + 2x = -2x + 44$

$$4x = 40$$
$$x = 10$$

6) $114 + -3x = 194 + -11x$

$$8x = 80$$
$$x = 10$$

7. _____ **8**

8. _____ **3**

9. _____ **7**

7) $4x - 12 = -2x + 36$

$$6x = 48$$
$$x = 8$$

8) $-3x + 90 = 117 - 12x$

$$9x = 27$$
$$x = 3$$

10. _____ **4**

11. _____ **7**

12. _____ **7**

9) $-2x + 90 = 125 + -7x$

$$5x = 35$$
$$x = 7$$

10) $101 + -3x = -10x + 129$

$$7x = 28$$
$$x = 4$$

11) $-1x + 46 = 116 - 11x$

$$10x = 70$$
$$x = 7$$

12) $3x + 22 = 92 - 7x$

$$10x = 70$$
$$x = 7$$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								
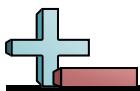
Find the value of x.

1) $3x + -1 = 0x + 14$

2) $-22 + 5x = 23 + 0x$

1. _____

2. _____

3. _____

3) $-1x + 60 = 80 + -5x$

4) $2x + -4 = 26 + -1x$

4. _____

5. _____

6. _____

5) $-5x + 91 = -11x + 103$

6) $26 + 2x = 61 - 3x$

7. _____

8. _____

9. _____

10. _____

7) $-1x + 97 = 111 - 3x$

8) $100 + -4x = -10x + 118$

11. _____

12. _____

9) $5x + -24 = 46 + -2x$

10) $79 + 1x = -7x + 119$

11) $12 + 1x = -6x + 75$

12) $50 - 1x = 90 - 9x$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								
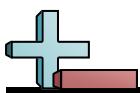
Find the value of x.

1) $3x + -1 = 0x + 14$

   $3x = 15$

   $x = 5$

2) $-22 + 5x = 23 + 0x$

   $5x = 45$

   $x = 9$

3) $-1x + 60 = 80 + -5x$

   $4x = 20$

   $x = 5$

4) $2x + -4 = 26 + -1x$

   $3x = 30$

   $x = 10$

5) $-5x + 91 = -11x + 103$

   $6x = 12$

   $x = 2$

6) $26 + 2x = 61 - 3x$

   $5x = 35$

   $x = 7$

7) $-1x + 97 = 111 - 3x$

   $2x = 14$

   $x = 7$

8) $100 + -4x = -10x + 118$

   $6x = 18$

   $x = 3$

9) $5x + -24 = 46 + -2x$

   $7x = 70$

   $x = 10$

10) $79 + 1x = -7x + 119$
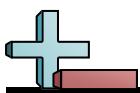
   $8x = 40$

   $x = 5$

11) $12 + 1x = -6x + 75$

   $7x = 63$

   $x = 9$

12) $50 - 1x = 90 - 9x$

   $8x = 40$

   $x = 5$

1.	**5**
2.	**9**
3.	**5**
4.	**10**
5.	**2**
6.	**7**
7.	**7**
8.	**3**
9.	**10**
10.	**5**
11.	**9**
12.	**5**

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Determining Variable Value to Balance Equations   Name:

Find the value of x.

1) -1x + 41 = -8x + 62   **2)** 92 - 5x = -9x + 100

3) -5x + 116 = -7x + 132   **4)** 90 + -3x = 120 + -6x

5) 81 + 1x = -1x + 95   **6)** -3x + 92 = 110 - 12x

7) 104 + -2x = -5x + 125   **8)** -21 + 4x = 59 + -4x

9) 74 + -3x = 80 + -5x   **10)** -2x + 33 = 43 + -4x

11) 74 + -2x = 106 + -6x   **12)** -5x + 53 = 83 + -10x

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Find the value of x.

1) -1x + 41 = -8x + 62
$$7x = 21$$
$$x = 3$$

2) 92 - 5x = -9x + 100
$$4x = 8$$
$$x = 2$$

1. _____ **3**

2. _____ **2**

3. _____ **8**

3) -5x + 116 = -7x + 132
$$2x = 16$$
$$x = 8$$

4) 90 + -3x = 120 + -6x
$$3x = 30$$
$$x = 10$$

4. _____ **10**

5. _____ **7**

6. _____ **2**

5) 81 + 1x = -1x + 95
$$2x = 14$$
$$x = 7$$

6) -3x + 92 = 110 - 12x
$$9x = 18$$
$$x = 2$$

7. _____ **7**

8. _____ **10**

9. _____ **3**

7) 104 + -2x = -5x + 125
$$3x = 21$$
$$x = 7$$

8) -21 + 4x = 59 + -4x
$$8x = 80$$
$$x = 10$$

10. _____ **5**

11. _____ **8**

12. _____ **6**

9) 74 + -3x = 80 + -5x
$$2x = 6$$
$$x = 3$$

10) -2x + 33 = 43 + -4x
$$2x = 10$$
$$x = 5$$

11) 74 + -2x = 106 + -6x
$$4x = 32$$
$$x = 8$$

12) -5x + 53 = 83 + -10x
$$5x = 30$$
$$x = 6$$

Determining Variable Value to Balance Equations

Name: _____
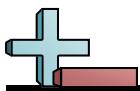
Find the value of x.

1) $62 + 2x = 134 - 7x$

2) $37 + -2x = 41 + -4x$

3) $46 - 1x = 61 - 6x$

4) $72 + 3x = 112 + -7x$

5) $1x + 67 = -1x + 85$

6) $-3x + 78 = -13x + 168$

7) $43 + 3x = 88 + -6x$

8) $76 - 1x = 94 - 10x$

9) $1x + 2 = -5x + 56$

10) $-5x + 26 = -14x + 53$

11) $-1x + 22 = -11x + 52$

12) $-2x + 91 = 103 + -6x$
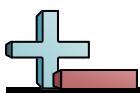
Find the value of x.

1) $62 + 2x = 134 - 7x$
$9x = 72$
$x = 8$

2) $37 + -2x = 41 + -4x$
$2x = 4$
$x = 2$

1. _____ **8**

2. _____ **2**

3. _____ **3**

3) $46 - 1x = 61 - 6x$
$5x = 15$
$x = 3$

4) $72 + 3x = 112 + -7x$
$10x = 40$
$x = 4$

4. _____ **4**

5. _____ **9**

6. _____ **9**

5) $1x + 67 = -1x + 85$
$2x = 18$
$x = 9$

6) $-3x + 78 = -13x + 168$
$10x = 90$
$x = 9$

7. _____ **5**

8. _____ **2**

9. _____ **9**

7) $43 + 3x = 88 + -6x$
$9x = 45$
$x = 5$

8) $76 - 1x = 94 - 10x$
$9x = 18$
$x = 2$

10. _____ **3**

11. _____ **3**
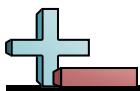
12. _____ **3**

9) $1x + 2 = -5x + 56$
$6x = 54$
$x = 9$

10) $-5x + 26 = -14x + 53$
$9x = 27$
$x = 3$

11) $-1x + 22 = -11x + 52$
$10x = 30$
$x = 3$

12) $-2x + 91 = 103 + -6x$
$4x = 12$
$x = 3$

Determining Variable Value to Balance Equations

Name:

Find the value of x.

1) $2x + 67 = -8x + 87$

2) $54 + 4x = 117 - 3x$

1. _____

2. _____

3. _____

3) $-31 + 5x = 0x + 14$

4) $33 + -1x = -10x + 69$

4. _____

5. _____

6. _____

5) $-28 + 5x = 0x + 12$

6) $-5x + 113 = -13x + 153$

7. _____

8. _____

9. _____

7) $-4x + 55 = 83 - 8x$

8) $55 - 1x = -11x + 155$

10. _____

11. _____

12. _____

9) $77 - 2x = 109 - 6x$

10) $56 + -2x = 88 + -10x$

11) $52 + -1x = 88 + -7x$

12) $-3x + 23 = -7x + 35$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Find the value of x.

Answers

1) $2x + 67 = -8x + 87$

$10x = 20$

$x = 2$

2) $54 + 4x = 117 - 3x$

$7x = 63$

$x = 9$

1. _____**2**_____

2. _____**9**_____

3. _____**9**_____

3) $-31 + 5x = 0x + 14$

$5x = 45$

$x = 9$

4) $33 + -1x = -10x + 69$

$9x = 36$

$x = 4$

4. _____**4**_____

5. _____**8**_____

6. _____**5**_____

5) $-28 + 5x = 0x + 12$

$5x = 40$

$x = 8$

6) $-5x + 113 = -13x + 153$

$8x = 40$

$x = 5$

7. _____**7**_____

8. _____**10**_____

9. _____**8**_____

7) $-4x + 55 = 83 - 8x$

$4x = 28$

$x = 7$

8) $55 - 1x = -11x + 155$

$10x = 100$

$x = 10$

10. _____**4**_____

11. _____**6**_____

12. _____**3**_____
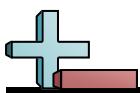
9) $77 - 2x = 109 - 6x$

$4x = 32$

$x = 8$

10) $56 + -2x = 88 + -10x$

$8x = 32$

$x = 4$

11) $52 + -1x = 88 + -7x$

$6x = 36$

$x = 6$

12) $-3x + 23 = -7x + 35$

$4x = 12$

$x = 3$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Determining Variable Value to Balance Equations   Name:

Find the value of x.

1) 2x + 15 = 0x + 33

2) -5x + 100 = -11x + 112

1. _____

2. _____

3. _____

3) -1x + 95 = 130 - 6x

4) -5x + 75 = -9x + 103

4. _____

5. _____

6. _____

5) 3x + 8 = -4x + 64

6) 1x + 17 = 52 + -6x

7. _____

8. _____

9. _____

7) 19 + 2x = 34 - 3x

8) 22 + 5x = -5x + 122

10. _____

11. _____

12. _____

9) -1x + 84 = 174 - 10x

10) 3x + 26 = 38 + 1x

11) 72 + -4x = 108 + -13x

12) 25 + -2x = 40 + -7x

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Find the value of x.

Answers

1) 2x + 15 = 0x + 33

2x = 18

x = 9

2) -5x + 100 = -11x + 112

6x = 12

x = 2

1. _____ **9**

2. _____ **2**

3) -1x + 95 = 130 - 6x

5x = 35

x = 7

4) -5x + 75 = -9x + 103

4x = 28

x = 7

3. _____ **7**

4. _____ **7**

5. _____ **8**

6. _____ **5**

5) 3x + 8 = -4x + 64

7x = 56

x = 8

6) 1x + 17 = 52 + -6x

7x = 35

x = 5

7. _____ **3**

8. _____ **10**

9. _____ **10**

7) 19 + 2x = 34 - 3x

5x = 15

x = 3

8) 22 + 5x = -5x + 122

10x = 100

x = 10

10. _____ **6**

11. _____ **4**

12. _____ **3**

9) -1x + 84 = 174 - 10x

9x = 90

x = 10

10) 3x + 26 = 38 + 1x

2x = 12

x = 6

11) 72 + -4x = 108 + -13x

9x = 36

x = 4

12) 25 + -2x = 40 + -7x

5x = 15

x = 3

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								
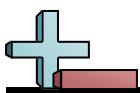
Find the value of x.

1) $56 - 1x = -11x + 106$

2) $59 + -3x = 77 + -5x$

1. _____

2. _____

3. _____

3) $1x + 39 = 64 - 4x$

4) $-5x + 45 = 65 - 15x$

4. _____

5. _____

6. _____

5) $13 + 3x = -4x + 62$

6) $-19 + 4x = 13 + 0x$

7. _____

8. _____

9. _____

10. _____

7) $55 + 3x = -1x + 79$

8) $-3x + 39 = -9x + 51$

11. _____

12. _____

9) $66 + 2x = 120 - 7x$

10) $-2x + 42 = -10x + 90$

11) $4x + 32 = -4x + 48$

12) $-2x + 75 = 84 + -5x$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Find the value of x.

Answers

1) 56 - 1x = -11x + 106
　　10x = 50
　　x = 5

2) 59 + -3x = 77 + -5x
　　2x = 18
　　x = 9

3) 1x + 39 = 64 - 4x
　　5x = 25
　　x = 5

4) -5x + 45 = 65 - 15x
　　10x = 20
　　x = 2

5) 13 + 3x = -4x + 62
　　7x = 49
　　x = 7

6) -19 + 4x = 13 + 0x
　　4x = 32
　　x = 8

7) 55 + 3x = -1x + 79
　　4x = 24
　　x = 6

8) -3x + 39 = -9x + 51
　　6x = 12
　　x = 2

9) 66 + 2x = 120 - 7x
　　9x = 54
　　x = 6

10) -2x + 42 = -10x + 90
　　8x = 48
　　x = 6

11) 4x + 32 = -4x + 48
　　8x = 16
　　x = 2

12) -2x + 75 = 84 + -5x
　　3x = 9
　　x = 3

1. **5**
2. **9**
3. **5**
4. **2**
5. **7**
6. **8**
7. **6**
8. **2**
9. **6**
10. **6**
11. **2**
12. **3**

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Determining Variable Value to Balance Equations

Name:
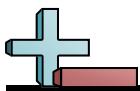
Find the value of x.

1) -4x + 66 = -8x + 82

2) 8 + 1x = 20 + -3x

3) 4x + 9 = -1x + 24

4) 9 + 2x = -6x + 25

5) 61 - 1x = 76 - 4x

6) 73 + -4x = 118 + -13x

7) 18 + -1x = -5x + 46

8) -4x + 72 = -14x + 152

9) 95 + -5x = 119 + -9x

10) -2x + 55 = 63 + -6x

11) 55 + 1x = -8x + 109

12) 4x + 23 = 41 + 1x

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Find the value of x.

Answers

1) -4x + 66 = -8x + 82

4x = 16

x = 4

2) 8 + 1x = 20 + -3x

4x = 12

x = 3

1. _____ **4**

2. _____ **3**

3. _____ **3**

3) 4x + 9 = -1x + 24

5x = 15

x = 3

4) 9 + 2x = -6x + 25

8x = 16

x = 2

4. _____ **2**

5. _____ **5**

6. _____ **5**

5) 61 - 1x = 76 - 4x

3x = 15

x = 5

6) 73 + -4x = 118 + -13x

9x = 45

x = 5

7. _____ **7**

8. _____ **8**

9. _____ **6**

7) 18 + -1x = -5x + 46

4x = 28

x = 7

8) -4x + 72 = -14x + 152

10x = 80

x = 8

10. _____ **2**

11. _____ **6**

12. _____ **6**

9) 95 + -5x = 119 + -9x

4x = 24

x = 6

10) -2x + 55 = 63 + -6x

4x = 8

x = 2

11) 55 + 1x = -8x + 109

9x = 54

x = 6

12) 4x + 23 = 41 + 1x

3x = 18

x = 6

| 1-10 | 92 | 83 | 75 | 67 | 58 | 50 | 42 | 33 | 25 | 17 |
| 11-12 | 8 | 0 | | | | | | | | |
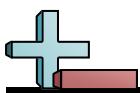
Find the value of x.

1) $62 - 1x = -11x + 122$

2) $40 - 1x = 110 - 8x$

1. _____

2. _____

3. _____

3) $64 - 3x = 92 - 7x$

4) $-5x + 71 = -14x + 98$

4. _____

5. _____

6. _____

5) $1x + 41 = 59 - 8x$

6) $-5x + 122 = -15x + 212$

7. _____

8. _____

9. _____

10. _____

7) $96 + -3x = -6x + 120$

8) $-5x + 113 = 153 + -9x$

11. _____

12. _____

9) $-1x + 91 = -7x + 127$

10) $65 + -5x = 83 + -14x$

11) $139 + -5x = 199 + -11x$

12) $-21 + 4x = 3 + 1x$

Math   www.CommonCoreSheets.com   9

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								
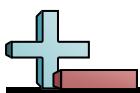
Find the value of x.

1) $62 - 1x = -11x + 122$
$$10x = 60$$
$$x = 6$$

2) $40 - 1x = 110 - 8x$
$$7x = 70$$
$$x = 10$$

1. _____ **6**

2. _____ **10**

3. _____ **7**

3) $64 - 3x = 92 - 7x$
$$4x = 28$$
$$x = 7$$

4) $-5x + 71 = -14x + 98$
$$9x = 27$$
$$x = 3$$

4. _____ **3**

5. _____ **2**

6. _____ **9**

5) $1x + 41 = 59 - 8x$
$$9x = 18$$
$$x = 2$$

6) $-5x + 122 = -15x + 212$
$$10x = 90$$
$$x = 9$$

7. _____ **8**

8. _____ **10**

9. _____ **6**

7) $96 + -3x = -6x + 120$
$$3x = 24$$
$$x = 8$$

8) $-5x + 113 = 153 + -9x$
$$4x = 40$$
$$x = 10$$

10. _____ **2**

11. _____ **10**

12. _____ **8**

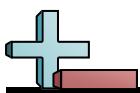**9)** $-1x + 91 = -7x + 127$
$$6x = 36$$
$$x = 6$$

10) $65 + -5x = 83 + -14x$
$$9x = 18$$
$$x = 2$$

11) $139 + -5x = 199 + -11x$
$$6x = 60$$
$$x = 10$$

12) $-21 + 4x = 3 + 1x$
$$3x = 24$$
$$x = 8$$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								

Determining Variable Value to Balance Equations   Name:

Find the value of x.

1) -19 + 4x = 21 + 0x

2) -4x + 107 = 155 + -10x

1. _____

2. _____

3. _____

3) 49 + 2x = -8x + 99

4) -4x + 88 = -7x + 112

4. _____

5. _____

6. _____

5) -3x + 45 = -9x + 93

6) 5x + 56 = -2x + 91

7. _____

8. _____

9. _____

7) 56 + 1x = -8x + 137

8) 4x + 17 = 32 + 1x

10. _____

11. _____

12. _____

9) -3x + 53 = -9x + 77

10) 19 + -4x = 33 + -11x

11) -2x + 38 = -12x + 58

12) 52 - 1x = 72 - 5x

Math   www.CommonCoreSheets.com   10

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								
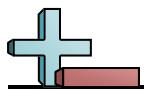
Find the value of x.

1) $-19 + 4x = 21 + 0x$
$4x = 40$
$x = 10$

2) $-4x + 107 = 155 + -10x$
$6x = 48$
$x = 8$

1. _____ **10**

2. _____ **8**

3. _____ **5**

3) $49 + 2x = -8x + 99$
$10x = 50$
$x = 5$

4) $-4x + 88 = -7x + 112$
$3x = 24$
$x = 8$

4. _____ **8**

5. _____ **8**

6. _____ **5**

5) $-3x + 45 = -9x + 93$
$6x = 48$
$x = 8$

6) $5x + 56 = -2x + 91$
$7x = 35$
$x = 5$

7. _____ **9**

8. _____ **5**

9. _____ **4**

7) $56 + 1x = -8x + 137$
$9x = 81$
$x = 9$

8) $4x + 17 = 32 + 1x$
$3x = 15$
$x = 5$

10. _____ **2**

11. _____ **2**

12. _____ **5**

9) $-3x + 53 = -9x + 77$
$6x = 24$
$x = 4$

10) $19 + -4x = 33 + -11x$
$7x = 14$
$x = 2$

11) $-2x + 38 = -12x + 58$
$10x = 20$
$x = 2$

12) $52 - 1x = 72 - 5x$
$4x = 20$
$x = 5$

1-10	92	83	75	67	58	50	42	33	25	17
11-12	8	0								