

antwoorden opgaven balansmethode

1.

A. $3x + 7 = 28$

$$3x = 21$$

$$x = 7$$

B. $4x + 9 = 53$

$$4x = 44$$

$$x = 11$$

C. $2x + 3 = 11$

$$2x = 8$$

$$x = 4$$

D. $5 + 4x = 39$

$$4x = 34$$

$$x = 8,5$$

E. $12 + 3x = 15$

$$3x = 3$$

$$x = 1$$

F. $2x - 8 = 20$

$$2x = 28$$

$$x = 14$$

G. $3x - 7 = 41$

$$3x = 48$$

$$x = 16$$

H. $12 - 4x = 2$

$$4x = 10$$

$$x = 2,5$$

I. $5 - 8x = -11$

$$8x = 16$$

$$x = 2$$

J. $100 - 9x = 1$

$$9x = 99$$

$$x = 11$$

2.

A. $5x + 3 = 2x + 30$

$$3x + 3 = 30$$

$$3x = 27$$

$$x = 9$$

B. $4x + 10 = 2x + 2$

$$2x + 10 = 2$$

$$2x = -8$$

$$x = -4$$

C. $6x - 7 = x + 8$

$$5x - 7 = 8$$

$$5x = 15$$

$$x = 3$$

D. $3x + 20 = 8x - 5$

$$20 = 5x - 5$$

$$5x = 25$$

$$x = 5$$

E. $7x + 19 = 2x + 29$

$$5x + 19 = 29$$

$$5x = 10$$

$$x = 2$$

F. $8x - 9 = 4x - 5$

$$4x - 9 = -5$$

$$4x = 4$$

$$x = 1$$

G. $2x + 1 = 10x - 7$

$$1 = 8x - 7$$

$$8x = 8$$

$$x = 1$$

H. $3x - 8 = x + 7$

$$2 - 8 = 7$$

$$2x = 15$$

$$x = 7,5$$

I. $x = 5x - 4$

$$0 = 4x - 4$$

$$4x = 4$$

$$x = 1$$

J. $6x + 6 = 8x + 8$

$$6 = 2x + 8$$

$$2x = -2$$

$$x = -1$$

3.

A. $5x + 2 = -x + 32$

$$6x + 2 = 32$$

$$6x = 30$$

$$x = 5$$

B. $-2x + 10 = 3x - 25$

$$10 = 5x - 25$$

$$5x = 35$$

$$x = 7$$

C. $-3x + 6 = 3x - 6$

$$6 = 6x - 6$$

$$6x = 12$$

$$x = 2$$

D. $-8x - 20 = 2x + 5$

$$-20 = 10x + 5$$

$$10x = -25$$

$$x = -2,5$$

E. $5x - 8 = -3x + 24$

$$8x - 8 = 24$$

$$8x = 32$$

$$x = 4$$

F. $-7x - 10 = 5x - 46$

$$-10 = 12x - 46$$

$$12x = 36$$

$$x = 3$$

G. $12 + 3x = -x - 8$

$$12 + 4x = -8$$

$$4x = -20$$

$$x = -5$$

H. $6 = -2x + 20$

$$2x + 6 = 20$$

$$2x = 14$$

$$x = 7$$

I. $-3x - 3 = 6x + 6$

$$-3 = 9x + 6$$

$$9x = -9$$

$$x = -1$$

J. $-6x + 100 = 3x + 28$

$$100 = 9x + 28$$

$$9x = 72$$

$$x = 8$$

4.

A. $-2x + 7 = -5x + 13$

$$3x + 7 = 13$$

$$3x = 6$$

$$x = 2$$

B. $-5x - 3 = -10x + 27$

$$5x - 3 = 27$$

$$3x = 30$$

$$x = 6$$

C. $-4x + 8 = -2x + 1$

$$8 = 2x + 1$$

$$2x = 7$$

$$x = 3,5$$

D. $-3x + 10 = -x - 8$

$$10 = 2x - 8$$

$$2x = 18$$

$$x = 9$$

E. $-5x - 2 = -3x + 2$

$$-2 = 2x + 2$$

$$2x = -4$$

$$x = -2$$

F. $-12x + 82 = -6x - 2$

$$82 = 6x - 2$$

$$6x = 84$$

$$x = 14$$

G. $-3x - 3 = -6x - 6$

$$3x - 3 = -6$$

$$3x = -3$$

$$x = -1$$

H. $-x + 3 = -8x + 24$

$$7x + 3 = 24$$

$$7x = 21$$

$$x = 3$$

I. $-5x - 1 = -7x + 1$

$$2x - 1 = 1$$

$$2x = 2$$

$$x = 1$$

J. $-7x + 12 = -13x + 12$

$$6x + 12 = 12$$

$$6x = 0$$

$$x = 0$$

5.

A. $7x + 3 = 4x + 15$

$$3x + 3 = 15$$

$$3x = 12$$

$$x = 4$$

B. $5a + 9 = 8a + 3$

$$9 = 3a + 3$$

$$6 = 3a$$

$$a = 2$$

C. $6p + 2 = 4p + 17$

$$2p + 2 = 17$$

$$2p = 15$$

$$p = 7,5$$

D. $4m - 8 = 2m + 4$

$$2m - 8 = 4$$

$$2m = 12$$

$$m = 6$$

E. $3q + 3 = 8q - 22$

$$3 = 5q - 22$$

$$25 = 5q$$

$$q = 5$$

F. $7h - 12 = h + 36$

$$6h - 12 = 36$$

$$6h = 48$$

$$h = 8$$

G. $9z + 13 = 7z - 15$

$$2z + 13 = -15$$

$$2z = -28$$

$$z = -14$$

H. $-8d + 7 = 2d + 47$

$$7 = 10d + 47$$

$$-40 = 10d$$

$$d = -4$$

I. $6w - 7 = 4w - 21$

$$2w - 7 = -21$$

$$2w = -14$$

$$w = -7$$

J. $12 + 2k = -5k - 23$

$$12 + 7k = -23$$

$$7k = -35$$

$$k = -5$$

6.

A. $8x + 13 = 3x + 33$

$$5x + 13 = 33$$

$$5x = 20$$

$$x = 4$$

B. $4a + 13 = 7a + 3$

$$13 = 3a + 3$$

$$10 = 3a$$

$$a = 3\frac{1}{3}$$

C. $7p + 7 = 5p + 19$

$$2p + 7 = 19$$

$$2p = 12$$

$$p = 6$$

D. $3m - 7 = m + 13$

$$2m - 7 = 13$$

$$2m = 20$$

$$m = 10$$

E. $5q + 6 = 9q - 32$

$$6 = 4q - 32$$

$$38 = 4q$$

$$q = 9,5$$

F. $9h - 14 = 2h + 35$

$$7h - 14 = 35$$

$$7h = 49$$

$$h = 7$$

G. $11z + 23 = 5z - 37$

$$6z + 23 = -37$$

$$6z = -60$$

$$z = -10$$

H. $-8d + 9 = 3d + 42$

$$9 = 11d + 42$$

$$-33 = 11d$$

$$d = -3$$

I. $9w - 31 = 6w - 18$

$$3w - 31 = -18$$

$$3w = 13$$

$$d = 4\frac{1}{3}$$

J. $5 + 4k = -5k - 67$

$$5 + 9k = -67$$

$$9k = -72$$

$$k = -8$$

7.

A. $8x - 43 = 3x - 25$

$$5x - 43 = -25$$

$$5x = 18$$

$$x = 3,6$$

B. $4a + 19 = 7a - 14$

$$19 = 3a - 14$$

$$33 = 3a$$

$$a = 11$$

C. $-5p - 12 = p + 15$

$$-12 = 6p + 15$$

$$-27 = 6p$$

$$p = -4,5$$

D. $27 - 4m = 2m + 3$

$$27 = 6m + 3$$

$$24 = 6m$$

$$m = 4$$

E. $6q + 2 = -2q - 26$

$$8q + 2 = -26$$

$$8q = -28$$

$$q = -3,5$$

F. $2h - 10 = 16 - 3h$

$$5h - 10 = 16$$

$$5h = 26$$

$$h = 5,2$$

G. $-2z + 17 = -4z - 15$

$$2z + 17 = -15$$

$$2z = -32$$

$$z = -16$$

H. $-5d + 32 = 3d - 32$

$$32 = 8d - 32$$

$$8d = 64$$

$$d = 8$$

I. $12 - w = 5w + 12$

$$12 = 6w + 12$$

$$6w = 0$$

$$w = 0$$

J. $31 + -4k = -7k - 23$

$$31 + 3k = -23$$

$$3k = -54$$

$$k = -18$$

8.

A. $6x - 37 = 4x - 24$

$$2x - 37 = -24$$

$$2x = 13$$

$$x = 6,5$$

B. $14a + 67 = 9a - 13$

$$5a + 67 = -13$$

$$5a = -80$$

$$a = -16$$

C. $-6p - 17 = p + 18$

$$-17 = 7p + 18$$

$$-35 = 7p$$

$$p = -5$$

D. $45 - 9m = 4m + 6$

$$45 = 13m + 6$$

$$39 = 13m$$

$$m = 3$$

E. $8q + 5 = -4q - 25$

$$12q + 5 = -25$$

$$12q = -30$$

$$q = -2,5$$

F. $5h - 30 = 46 - 5h$

$$10h - 30 = 46$$

$$10h = 76$$

$$h = 7,6$$

G. $-3z + 26 = -6z - 16$

$$3z + 26 = -16$$

$$3z = -42$$

$$z = -14$$

H. $-7d + 42 = 8d - 33$

$$42 = 15d - 33$$

$$75 = 15d$$

$$d = 5$$

I. $19 - w = 3w + 41$

$$19 = 4w + 41$$

$$4w = -22$$

$$w = -5,5$$

J. $19 + -9k = -6k - 32$

$$19 = 3k - 32$$

$$51 = 3k$$

$$k = 17$$

9.

A. $\frac{1}{2}x - 4 = \frac{1}{4}x + 12$

$$2x - 16 = x + 48$$

$$x - 16 = 48$$

$$x = 64$$

B. $2(a + 3) = 5a - 5$

$$2a + 6 = 5a - 5$$

$$6 = 3a - 5$$

$$11 = 3a$$

$$a = 3\frac{2}{3}$$

C. $2\frac{2}{3}p - \frac{1}{3} = 3\frac{1}{3}p + 1$

$$8p - 1 = 10p + 3$$

$$-1 = 2p + 3$$

$$-4 = 2p$$

$$p = -2$$

D. $3(2d + 4) = 2(d - 6) + 6$

$$6d + 12 = 2d - 12 + 6$$

$$6d + 12 = 2d - 6$$

$$4d + 12 = -6$$

$$4d = -18$$

$$d = -4\frac{1}{2}$$

E. $3(q + 2) - 4q = q - 6$

$$3q + 6 - 4q = q - 6$$

$$-q + 6 = q - 6$$

$$6 = 2q - 6$$

$$12 = 2q$$

$$q = 6$$

F. $-3(h - 2\frac{1}{3}) = 4(3\frac{1}{2} - h)$

$$-3h + 7 = 14 - 4h$$

$$h + 7 = 14$$

$$h = 7$$

G. $5 - 4z + 17 = -3z - 15 + z$

$$22 - 4z = -2z - 15$$

$$22 = 2z - 15$$

$$37 = 2z$$

$$z = 18\frac{1}{2}$$

H. $5(7 - m) = 2(m + 7)$

$$35 - 5m = 2m + 14$$

$$35 = 7m + 14$$

$$21 = 7m$$

$$m = 3$$

I. $\frac{1}{4}(12 - w) = 2\frac{3}{4}w + 12$

$$3 - \frac{1}{4}w = 2\frac{3}{4}w + 12$$

$$12 - w = 11w + 48$$

$$12 = 12w + 48$$

$$-36 = 12w$$

$$w = -3$$

J. $3(k - 3) - 5(k - 4) = 4(k - 1)$

$$3k - 9 - 5k + 20 = 4k - 4$$

$$-2k + 11 = 4k - 4$$

$$11 = 6k - 4$$

$$15 = 6k$$

$$k = 2,5$$

10.

A. $7(a + 5) = 4a - 7$

$$7a + 35 = 4a - 7$$

$$3a + 35 = -7$$

$$3a = -42$$

$$a = -14$$

B. $-4(h - 2,75) = 5(1,5 - h)$

$$-4h + 11 = 7,5 - 5h$$

$$-8h + 22 = 15 - 10h$$

$$2h + 22 = 15$$

$$2h = -7$$

$$h = -3,5$$

C. $1\frac{2}{3}p - 3\frac{2}{3} = 4\frac{1}{3}p + 3$

$$5p - 11 = 13p + 9$$

$$-11 = 8p + 9$$

$$-20 = 8p$$

$$p = -2,5$$

D. $9(5 - m) = 5(m + 2)$

$$45 - 9m = 5m + 10$$

$$45 = 14m + 10$$

$$35 = 14m$$

$$m = 2,5$$

E. $4(k - 6) - 6(k - 3) = 3(k - 4)$

$$4k - 24 - 6k + 18 = 3k - 12$$

$$-2k - 6 = 3k - 12$$

$$-6 = 5k - 12$$

$$6 = 5k$$

$$k = 1\frac{1}{5}$$

F. $\frac{1}{3}x - 5 = \frac{3}{4}x + 15$

$$4x - 60 = 9x + 180$$

$$-60 = 5x + 180$$

$$-240 = 5x$$

$$x = -48$$

G. $13 - 5z + 21 = -8z - 42 + z$

$$34 - 5z = -7z - 42$$

$$34 + 2z = -42$$

$$2z = -76$$

$$z = -38$$

H. $5(3d + 7) = 4(d - 9) + 5$

$$15d + 35 = 4d - 36 + 5$$

$$15d + 35 = 4d - 31$$

$$11d + 35 = -31$$

$$11d = -66$$

$$d = -6$$

I. $\frac{1}{5}(15 - w) = 2\frac{1}{5}w + 27$

$$3 - \frac{1}{5}w = 2\frac{1}{5}w + 27$$

$$15 - w = 11w + 135$$

$$15 = 12w + 135$$

$$-120 = 12w$$

$$w = -10$$

J. $7(q + 3) - 5q = q - 9$

$$7q + 21 - 5q = q - 9$$

$$2q + 21 = q - 9$$

$$q + 21 = -9$$

$$q = -30$$