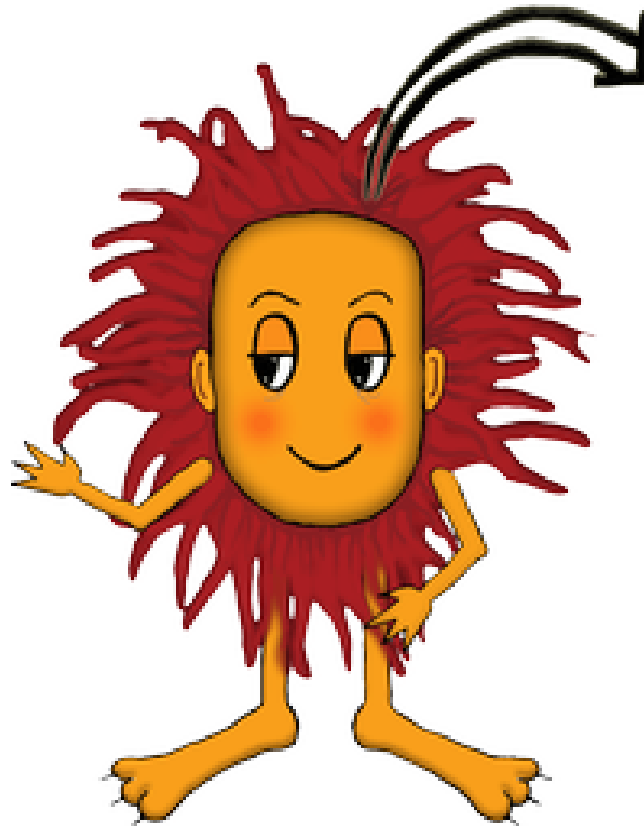


Velika logična pošast



Eulerjeva metoda reševanja diofantskih enačb

Dana je diofantska enačba

$$ax+by=c.$$

Enačbo rešujemo samo v primeru, če sta a in b medseboj tuji naravni števili.

1.
 $10x+11y=4$

2.

$$18x+35y=9$$

3.

$$17x+43y=1$$

4.

$$17x+31y=8$$

5.

$$9x+22y=6$$

6.

$$30x+31y=8$$

7.

$$25x+49y=3$$

8.

$$11x+12y=9$$

9.

$$11x+35y=5$$

10.

$$26x+27y=3$$

11.

$$8x+9y=8$$

12.

$$15x+44y=5$$

13.

$$25x+29y=6$$

14.

$$6x+7y=5$$

15.

$$9x+43y=8$$

16.

$$23x+34y=2$$

17.

$$18x+19y=5$$

18.

$$13x+15y=6$$

19.

$$8x+9y=9$$

20.

$$25x+33y=9$$

21.

$$23x+24y=5$$

22.

$$23x+38y=6$$

23.

$$5x+44y=6$$

24.

$$28x+29y=4$$

25.

$$11x+47y=4$$

26.

$$7x+44y=3$$

27.

$$3x+49y=5$$

28.

$$9x+10y=2$$

29.

$$23x+31y=4$$

30.

$$20x+41y=8$$

31.

$$6x+7y=8$$

32.

$$27x+46y=3$$

33.

$$13x+42y=3$$

34.

$$25x+31y=9$$

35.

$$13x+22y=9$$

36.

$$10x+39y=4$$

37.

$$19x+43y=6$$

38.

$$20x+41y=3$$

39.

$$3x+26y=3$$

40.

$$11x+13y=3$$

41.

$$23x+47y=6$$

42.

$$29x + 49y = 9$$

43.

$$16x + 45y = 6$$

44.

$$20x + 39y = 6$$

45.

$$24x + 25y = 2$$

46.

$$17x + 49y = 8$$

47.

$$19x + 26y = 4$$

48.

$$18x + 19y = 2$$

49.

$$11x + 35y = 1$$

50.

$$30x + 31y = 9$$

Rešitve:

1.

Enačba: $10x + 11y = 4$

$10x + 11y = 4$	$x = -y + \left(\frac{4-y}{10}\right)$	$z = \frac{4-y}{10}$
$y + (10z) = 4$	$y = 4 - 10z$	

$$y = 4 - 10z$$

$$x = -4 + 11z$$

2.

Enačba: $18x + 35y = 9$

$18x + 35y = 9$	$x = -y + \left(\frac{1}{18}(9 - 17y)\right)$	$z = \frac{1}{18}(9 - 17y)$
$17y + (18z) = 9$	$y = -z + \left(\frac{9-z}{17}\right)$	$s = \frac{9-z}{17}$
$z + (17s) = 9$	$z = 9 - 17s$	

$$z = 9 - 17s$$

$$y = -9 + 18s$$

$$x = 18 - 35s$$

3.

Enačba: $17x+43y=1$

$17x + 43y = 1$	$x = -2y + \left(\frac{1}{17}(1-9y)\right)$	$z = \frac{1}{17}(1-9y)$
$9y + (17z) = 1$	$y = -z + \left(\frac{1}{9}(1-8z)\right)$	$s = \frac{1}{9}(1-8z)$
$8z + (9s) = 1$	$z = -s + \left(\frac{1-s}{8}\right)$	$t = \frac{1-s}{8}$
$s + (8t) = 1$	$s = 1 - 8t$	

$$s = 1 - 8t$$

$$z = -1 + 9t$$

$$y = 2 - 17t$$

$$x = -5 + 43t$$

4.

Enačba: $17x+31y=8$

$17x + 31y = 8$	$x = -y + \left(\frac{1}{17}(8-14y)\right)$	$z = \frac{1}{17}(8-14y)$
$14y + (17z) = 8$	$y = -z + \left(\frac{1}{14}(8-3z)\right)$	$s = \frac{1}{14}(8-3z)$
$3z + (14s) = 8$	$z = 2 - 4s + \left(\frac{1}{3}(2-2s)\right)$	$t = \frac{1}{3}(2-2s)$
$2s + (3t) = 2$	$s = 1 - t + \left(-\frac{t}{2}\right)$	$u = -\frac{t}{2}$
$t + (2u) = 0$	$t = -2u$	

$$t = -2u$$

$$s = 1 + 3u$$

$$z = -2(1+7u)$$

$$y = 3+17u$$

$$x = -5-31u$$

5.

Enačba: $9x+22y=6$

$9x + 22y = 6$	$x = -2y + \left(\frac{1}{9}(6 - 4y)\right)$	$z = \frac{1}{9}(6 - 4y)$
$4y + (9z) = 6$	$y = 1 - 2z + \left(\frac{2-z}{4}\right)$	$s = \frac{2-z}{4}$
$z + (4s) = 2$	$z = 2 - 4s$	

$$z = 2 - 4s$$

$$y = -3 + 9s$$

$$x = 8 - 22s$$

6.

Enačba: $30x+31y=8$

$30x + 31y = 8$	$x = -y + \left(\frac{8-y}{30}\right)$	$z = \frac{8-y}{30}$
$y + (30z) = 8$	$y = 8 - 30z$	

$$y = 8 - 30z$$

$$x = -8 + 31z$$

7.

Enačba: $25x+49y=3$

$25x + 49y = 3$	$x = -y + \left(\frac{1}{25}(3 - 24y)\right)$	$z = \frac{1}{25}(3 - 24y)$
$24y + (25z) = 3$	$y = -z + \left(\frac{3-z}{24}\right)$	$s = \frac{3-z}{24}$
$z + (24s) = 3$	$z = 3 - 24s$	

$$z = 3 - 24s$$

$$y = -3 + 25s$$

$$x = 6 - 49s$$

8.

Enačba: $11x+12y=9$

$11x + 12y = 9$	$x = -y + \left(\frac{9-y}{11}\right)$	$z = \frac{9-y}{11}$
$y + (11z) = 9$	$y = 9 - 11z$	

$$y = 9 - 11z$$

$$x = -9 + 12z$$

9.

Enačba: $11x+35y=5$

$11x + 35y = 5$	$x = -3y + \left(\frac{1}{11}(5 - 2y)\right)$	$z = \frac{1}{11}(5 - 2y)$
$2y + (11z) = 5$	$y = 2 - 5z + \left(\frac{1-z}{2}\right)$	$s = \frac{1-z}{2}$
$z + (2s) = 1$	$z = 1 - 2s$	

$$z = 1 - 2s$$

$$y = -3 + 11s$$

$$x = 10 - 35s$$

10.

Enačba: $26x+27y=3$

$26x + 27y = 3$	$x = -y + \left(\frac{3-y}{26}\right)$	$z = \frac{3-y}{26}$
$y + (26z) = 3$	$y = 3 - 26z$	

$$y = 3 - 26z$$

$$x = -3 + 27z$$

11.

Enačba: $8x+9y=8$

$8x + 9y = 8$	$x = 1 - y + \left(-\frac{y}{8}\right)$	$z = -\frac{y}{8}$
$y + (8z) = 0$	$y = -8z$	

$$y = -8z$$

$$x = 1 + 9z$$

12.

Enačba: $15x+44y=5$

$15x + 44y = 5$	$x = -2y + \left(\frac{1}{15}(5 - 14y)\right)$	$z = \frac{1}{15}(5 - 14y)$
$14y + (15z) = 5$	$y = -z + \left(\frac{5-z}{14}\right)$	$s = \frac{5-z}{14}$
$z + (14s) = 5$	$z = 5 - 14s$	

$$z = 5 - 14s$$

$$y = -5 + 15s$$

$$x = 15 - 44s$$

13.

Enačba: $25x+29y=6$

$25x + 29y = 6$	$x = -y + \left(\frac{1}{25}(6 - 4y)\right)$	$z = \frac{1}{25}(6 - 4y)$
$4y + (25z) = 6$	$y = 1 - 6z + \left(\frac{2-z}{4}\right)$	$s = \frac{2-z}{4}$
$z + (4s) = 2$	$z = 2 - 4s$	

$$z = 2 - 4s$$

$$y = -11 + 25s$$

$$x = 13 - 29s$$

14.

Enačba: $6x+7y=5$

$6x + 7y = 5$	$x = -y + \left(\frac{5-y}{6}\right)$	$z = \frac{5-y}{6}$
$y + (6z) = 5$	$y = 5 - 6z$	

$$y = 5 - 6z$$

$$x = -5 + 7z$$

15.

Enačba: $9x+43y=8$

$9x + 43y = 8$	$x = -4y + \left(\frac{1}{9}(8 - 7y)\right)$	$z = \frac{1}{9}(8 - 7y)$
$7y + (9z) = 8$	$y = 1 - z + \left(\frac{1}{7}(1 - 2z)\right)$	$s = \frac{1}{7}(1 - 2z)$
$2z + (7s) = 1$	$z = -3s + \left(\frac{1-s}{2}\right)$	$t = \frac{1-s}{2}$
$s + (2t) = 1$	$s = 1 - 2t$	

$$s = 1 - 2t$$

$$z = -3 + 7t$$

$$y = 5 - 9t$$

$$x = -23 + 43t$$

16.

Enačba: $23x+34y=2$

$23x + 34y = 2$	$x = -y + \left(\frac{1}{23}(2 - 11y)\right)$	$z = \frac{1}{23}(2 - 11y)$
$11y + (23z) = 2$	$y = -2z + \left(\frac{2-z}{11}\right)$	$s = \frac{2-z}{11}$
$z + (11s) = 2$	$z = 2 - 11s$	

$$z = 2 - 11s$$

$$y = -4 + 23s$$

$$x = 6 - 34s$$

17.

Enačba: $18x+19y=5$

$18x + 19y = 5$	$x = -y + \left(\frac{5-y}{18}\right)$	$z = \frac{5-y}{18}$
$y + (18z) = 5$	$y = 5 - 18z$	

$$y = 5 - 18z$$

$$x = -5 + 19z$$

18.

Enačba: $13x+15y=6$

$13x + 15y = 6$	$x = -y + \left(\frac{1}{13}(6 - 2y)\right)$	$z = \frac{1}{13}(6 - 2y)$
$2y + (13z) = 6$	$y = 3 - 6z + \left(-\frac{z}{2}\right)$	$s = -\frac{z}{2}$
$z + (2s) = 0$	$z = -2s$	

$$z = -2s$$

$$y = 3 + 13s$$

$$x = -3(1 + 5s)$$

19.

Enačba: $8x+9y=9$

$8x + 9y = 9$	$x = 1 - y + \left(\frac{1-y}{8}\right)$	$z = \frac{1-y}{8}$
$y + (8z) = 1$	$y = 1 - 8z$	

$$y = 1 - 8z$$

$$x = 9z$$

20.

Enačba: $25x+33y=9$

$25x + 33y = 9$	$x = -y + \left(\frac{1}{25}(9 - 8y)\right)$	$z = \frac{1}{25}(9 - 8y)$
$8y + (25z) = 9$	$y = 1 - 3z + \left(\frac{1-z}{8}\right)$	$s = \frac{1-z}{8}$
$z + (8s) = 1$	$z = 1 - 8s$	

$$z = 1 - 8s$$

$$y = -2 + 25s$$

$$x = 3 - 33s$$

21.

Enačba: $23x+24y=5$

$23x + 24y = 5$	$x = -y + \left(\frac{5-y}{23}\right)$	$z = \frac{5-y}{23}$
$y + (23z) = 5$	$y = 5 - 23z$	

$$y = 5 - 23z$$

$$x = -5 + 24z$$

22.

Enačba: $23x+38y=6$

$23x + 38y = 6$	$x = -y + \left(\frac{1}{23}(6 - 15y)\right)$	$z = \frac{1}{23}(6 - 15y)$
$15y + (23z) = 6$	$y = -z + \left(\frac{1}{15}(6 - 8z)\right)$	$s = \frac{1}{15}(6 - 8z)$
$8z + (15s) = 6$	$z = -s + \left(\frac{1}{8}(6 - 7s)\right)$	$t = \frac{1}{8}(6 - 7s)$
$7s + (8t) = 6$	$s = -t + \left(\frac{6-t}{7}\right)$	$u = \frac{6-t}{7}$
$t + (7u) = 6$	$t = 6 - 7u$	

$$t = 6 - 7u$$

$$s = -6 + 8u$$

$$z = 12 - 15u$$

$$y = -18 + 23u$$

$$x = 30 - 38u$$

23.

Enačba: $5x+44y=6$

$5x + 44y = 6$	$x = 1 - 8y + \left(\frac{1}{5}(1 - 4y)\right)$	$z = \frac{1}{5}(1 - 4y)$
$4y + (5z) = 1$	$y = -z + \left(\frac{1-z}{4}\right)$	$s = \frac{1-z}{4}$
$z + (4s) = 1$	$z = 1 - 4s$	

$$z = 1 - 4s$$

$$y = -1 + 5s$$

$$x = 10 - 44s$$

24.

Enačba: $28x+29y=4$

$28x + 29y = 4$	$x = -y + \left(\frac{4-y}{28}\right)$	$z = \frac{4-y}{28}$
$y + (28z) = 4$	$y = 4 - 28z$	

$$y = 4 - 28z$$

$$x = -4 + 29z$$

25.

Enačba: $11x+47y=4$

$11x + 47y = 4$	$x = -4y + \left(\frac{1}{11}(4 - 3y)\right)$	$z = \frac{1}{11}(4 - 3y)$
$3y + (11z) = 4$	$y = 1 - 3z + \left(\frac{1}{3}(1 - 2z)\right)$	$s = \frac{1}{3}(1 - 2z)$
$2z + (3s) = 1$	$z = -s + \left(\frac{1-s}{2}\right)$	$t = \frac{1-s}{2}$
$s + (2t) = 1$	$s = 1 - 2t$	

$$s = 1 - 2t$$

$$z = -1 + 3t$$

$$y = 5 - 11t$$

$$x = -21 + 47t$$

26.

Enačba: $7x+44y=3$

$7x + 44y = 3$	$x = -6y + \left(\frac{1}{7}(3-2y)\right)$	$z = \frac{1}{7}(3-2y)$
$2y + (7z) = 3$	$y = 1-3z + \left(\frac{1-z}{2}\right)$	$s = \frac{1-z}{2}$
$z + (2s) = 1$	$z = 1-2s$	

$$z = 1 - 2s$$

$$y = -2 + 7s$$

$$x = 13 - 44s$$

27.

Enačba: $3x+49y=5$

$3x + 49y = 5$	$x = 1 - 16y + \left(\frac{2-y}{3}\right)$	$z = \frac{2-y}{3}$
$y + (3z) = 2$	$y = 2 - 3z$	

$$y = 2 - 3z$$

$$x = -31 + 49z$$

28.

Enačba: $9x+10y=2$

$9x + 10y = 2$	$x = -y + \left(\frac{2-y}{9}\right)$	$z = \frac{2-y}{9}$
$y + (9z) = 2$	$y = 2 - 9z$	

$$y = 2 - 9z$$

$$x = -2 + 10z$$

29.

Enačba: $23x+31y=4$

$23x + 31y = 4$	$x = -y + \left(\frac{1}{23}(4 - 8y)\right)$	$z = \frac{1}{23}(4 - 8y)$
$8y + (23z) = 4$	$y = -2z + \left(\frac{1}{8}(4 - 7z)\right)$	$s = \frac{1}{8}(4 - 7z)$
$7z + (8s) = 4$	$z = -s + \left(\frac{4-s}{7}\right)$	$t = \frac{4-s}{7}$
$s + (7t) = 4$	$s = 4 - 7t$	

$$s = 4 - 7t$$

$$z = -4 + 8t$$

$$y = 12 - 23t$$

$$x = -16 + 31t$$

30.

Enačba: $20x+41y=8$

$20x + 41y = 8$	$x = -2y + \left(\frac{8-y}{20}\right)$	$z = \frac{8-y}{20}$
$y + (20z) = 8$	$y = 8 - 20z$	

$$y = 8 - 20z$$

$$x = -16 + 41z$$

31.

Enačba: $6x+7y=8$

$6x + 7y = 8$	$x = 1 - y + \left(\frac{2-y}{6}\right)$	$z = \frac{2-y}{6}$
$y + (6z) = 2$	$y = 2 - 6z$	

$$y = 2 - 6z$$

$$x = -1 + 7z$$

32.

Enačba: $27x+46y=3$

$27x + 46y = 3$	$x = -y + \left(\frac{1}{27}(3 - 19y)\right)$	$z = \frac{1}{27}(3 - 19y)$
$19y + (27z) = 3$	$y = -z + \left(\frac{1}{19}(3 - 8z)\right)$	$s = \frac{1}{19}(3 - 8z)$
$8z + (19s) = 3$	$z = -2s + \left(\frac{1}{8}(3 - 3s)\right)$	$t = \frac{1}{8}(3 - 3s)$
$3s + (8t) = 3$	$s = 1 - 2t + \left(-\frac{2t}{3}\right)$	$u = -\frac{2t}{3}$
$2t + (3u) = 0$	$t = -u + \left(-\frac{u}{2}\right)$	$v = -\frac{u}{2}$
$u + (2v) = 0$	$u = -2v$	

$$\begin{aligned}
 u &= -2v \\
 t &= 3v \\
 s &= 1 - 8v \\
 z &= -2 + 19v \\
 y &= 3 - 27v \\
 x &= -5 + 46v
 \end{aligned}$$

33.

Enačba: $13x+42y=3$

$13x + 42y = 3$	$x = -3y + \left(\frac{1}{13}(3 - 3y)\right)$	$z = \frac{1}{13}(3 - 3y)$
$3y + (13z) = 3$	$y = 1 - 4z + \left(-\frac{z}{3}\right)$	$s = -\frac{z}{3}$
$z + (3s) = 0$	$z = -3s$	

$$\begin{aligned}
 z &= -3s \\
 y &= 1 + 13s \\
 x &= -3 - 42s
 \end{aligned}$$

34.

Enačba: $25x+31y=9$

$25x + 31y = 9$	$x = -y + \left(\frac{1}{25} (9 - 6y)\right)$	$z = \frac{1}{25} (9 - 6y)$
$6y + (25z) = 9$	$y = 1 - 4z + \left(\frac{3-z}{6}\right)$	$s = \frac{3-z}{6}$
$z + (6s) = 3$	$z = 3 - 6s$	

$$z = 3 - 6s$$

$$y = -11 + 25s$$

$$x = 14 - 31s$$

35.

Enačba: $13x+22y=9$

$13x + 22y = 9$	$x = -y + \left(\frac{1}{13} (9 - 9y)\right)$	$z = \frac{1}{13} (9 - 9y)$
$9y + (13z) = 9$	$y = 1 - z + \left(-\frac{4z}{9}\right)$	$s = -\frac{4z}{9}$
$4z + (9s) = 0$	$z = -2s + \left(-\frac{s}{4}\right)$	$t = -\frac{s}{4}$
$s + (4t) = 0$	$s = -4t$	

$$s = -4t$$

$$z = 9t$$

$$y = 1 - 13t$$

$$x = -1 + 22t$$

36.

Enačba: $10x+39y=4$

$10x + 39y = 4$	$x = -3y + \left(\frac{1}{10} (4 - 9y)\right)$	$z = \frac{1}{10} (4 - 9y)$
$9y + (10z) = 4$	$y = -z + \left(\frac{4-z}{9}\right)$	$s = \frac{4-z}{9}$
$z + (9s) = 4$	$z = 4 - 9s$	

$$z = 4 - 9s$$

$$y = -4 + 10s$$

$$x = 16 - 39s$$

37.

Enačba: $19x+43y=6$

$19x + 43y = 6$	$x = -2y + \left(\frac{1}{19}(6-5y)\right)$	$z = \frac{1}{19}(6-5y)$
$5y + (19z) = 6$	$y = 1-3z + \left(\frac{1}{5}(1-4z)\right)$	$s = \frac{1}{5}(1-4z)$
$4z + (5s) = 1$	$z = -s + \left(\frac{1-s}{4}\right)$	$t = \frac{1-s}{4}$
$s + (4t) = 1$	$s = 1-4t$	

$$s = 1 - 4t$$

$$z = -1 + 5t$$

$$y = 5 - 19t$$

$$x = -11 + 43t$$

38.

Enačba: $20x+41y=3$

$20x + 41y = 3$	$x = -2y + \left(\frac{3-y}{20}\right)$	$z = \frac{3-y}{20}$
$y + (20z) = 3$	$y = 3 - 20z$	

$$y = 3 - 20z$$

$$x = -6 + 41z$$

39.

Enačba: $3x+26y=3$

$3x + 26y = 3$	$x = 1 - 8y + \left(-\frac{2y}{3}\right)$	$z = -\frac{2y}{3}$
$2y + (3z) = 0$	$y = -z + \left(-\frac{z}{2}\right)$	$s = -\frac{z}{2}$
$z + (2s) = 0$	$z = -2s$	

$$z = -2s$$

$$y = 3s$$

$$x = 1 - 26s$$

40.

Enačba: $11x+13y=3$

$11x + 13y = 3$	$x = -y + \left(\frac{1}{11}(3 - 2y)\right)$	$z = \frac{1}{11}(3 - 2y)$
$2y + (11z) = 3$	$y = 1 - 5z + \left(\frac{1-z}{2}\right)$	$s = \frac{1-z}{2}$
$z + (2s) = 1$	$z = 1 - 2s$	

$$z = 1 - 2s$$

$$y = -4 + 11s$$

$$x = 5 - 13s$$

41.

Enačba: $23x+47y=6$

$23x + 47y = 6$	$x = -2y + \left(\frac{6-y}{23}\right)$	$z = \frac{6-y}{23}$
$y + (23z) = 6$	$y = 6 - 23z$	

$$y = 6 - 23z$$

$$x = -12 + 47z$$

42.

Enačba: $29x+49y=9$

$29x + 49y = 9$	$x = -y + \left(\frac{1}{29}(9 - 20y)\right)$	$z = \frac{1}{29}(9 - 20y)$
$20y + (29z) = 9$	$y = -z + \left(\frac{1}{20}(9 - 9z)\right)$	$s = \frac{1}{20}(9 - 9z)$
$9z + (20s) = 9$	$z = 1 - 2s + \left(-\frac{2s}{9}\right)$	$t = -\frac{2s}{9}$
$2s + (9t) = 0$	$s = -4t + \left(-\frac{t}{2}\right)$	$u = -\frac{t}{2}$
$t + (2u) = 0$	$t = -2u$	

$$t = -2u$$

$$s = 9u$$

$$z = 1 - 20u$$

$$y = -1 + 29u$$

$$x = 2 - 49u$$

43.

Enačba: $16x+45y=6$

$16x + 45y = 6$	$x = -2y + \left(\frac{1}{16}(6 - 13y)\right)$	$z = \frac{1}{16}(6 - 13y)$
$13y + (16z) = 6$	$y = -z + \left(\frac{1}{13}(6 - 3z)\right)$	$s = \frac{1}{13}(6 - 3z)$
$3z + (13s) = 6$	$z = 2 - 4s + \left(-\frac{s}{3}\right)$	$t = -\frac{s}{3}$
$s + (3t) = 0$	$s = -3t$	

$$s = -3t$$

$$z = 2 + 13t$$

$$y = -2(1 + 8t)$$

$$x = 6 + 45t$$

44.

Enačba: $20x+39y=6$

$20x + 39y = 6$	$x = -y + \left(\frac{1}{20}(6 - 19y)\right)$	$z = \frac{1}{20}(6 - 19y)$
$19y + (20z) = 6$	$y = -z + \left(\frac{6-z}{19}\right)$	$s = \frac{6-z}{19}$
$z + (19s) = 6$	$z = 6 - 19s$	

$$z = 6 - 19s$$

$$y = -6 + 20s$$

$$x = 12 - 39s$$

45.

Enačba: $24x+25y=2$

$24x + 25y = 2$	$x = -y + \left(\frac{2-y}{24}\right)$	$z = \frac{2-y}{24}$
$y + (24z) = 2$	$y = 2 - 24z$	

$$y = 2 - 24z$$

$$x = -2 + 25z$$

46.

Enačba: $17x+49y=8$

$17x + 49y = 8$	$x = -2y + \left(\frac{1}{17}(8 - 15y)\right)$	$z = \frac{1}{17}(8 - 15y)$
$15y + (17z) = 8$	$y = -z + \left(\frac{1}{15}(8 - 2z)\right)$	$s = \frac{1}{15}(8 - 2z)$
$2z + (15s) = 8$	$z = 4 - 7s + \left(-\frac{s}{2}\right)$	$t = -\frac{s}{2}$
$s + (2t) = 0$	$s = -2t$	

$$s = -2t$$

$$z = 4 + 15t$$

$$y = -4 - 17t$$

$$x = 12 + 49t$$

47.

Enačba: $19x+26y=4$

$19x + 26y = 4$	$x = -y + \left(\frac{1}{19}(4 - 7y)\right)$	$z = \frac{1}{19}(4 - 7y)$
$7y + (19z) = 4$	$y = -2z + \left(\frac{1}{7}(4 - 5z)\right)$	$s = \frac{1}{7}(4 - 5z)$
$5z + (7s) = 4$	$z = -s + \left(\frac{1}{5}(4 - 2s)\right)$	$t = \frac{1}{5}(4 - 2s)$
$2s + (5t) = 4$	$s = 2 - 2t + \left(-\frac{t}{2}\right)$	$u = -\frac{t}{2}$
$t + (2u) = 0$	$t = -2u$	

$$t = -2u$$

$$s = 2 + 5u$$

$$z = -2 - 7u$$

$$y = 6 + 19u$$

$$x = -8 - 26u$$

48.

Enačba: $18x+19y=2$

$18x + 19y = 2$	$x = -y + \left(\frac{2-y}{18}\right)$	$z = \frac{2-y}{18}$
$y + (18z) = 2$	$y = 2 - 18z$	

$$y = 2 - 18z$$

$$x = -2 + 19z$$

49.

Enačba: $11x+35y=1$

$11x + 35y = 1$	$x = -3y + \left(\frac{1}{11}(1-2y)\right)$	$z = \frac{1}{11}(1-2y)$
$2y + (11z) = 1$	$y = -5z + \left(\frac{1-z}{2}\right)$	$s = \frac{1-z}{2}$
$z + (2s) = 1$	$z = 1 - 2s$	

$$z = 1 - 2s$$

$$y = -5 + 11s$$

$$x = 16 - 35s$$

50.

Enačba: $30x+31y=9$

$30x + 31y = 9$	$x = -y + \left(\frac{9-y}{30}\right)$	$z = \frac{9-y}{30}$
$y + (30z) = 9$	$y = 9 - 30z$	

$$y = 9 - 30z$$

$$x = -9 + 31z$$