

1) Rozlož na součin

a) $24ab^2 - 12a^2b + 6a^2 = \underline{6a(4b^2 - 2ab + 3a)}$

b) $2x(6r + 7) - 3y(6r + 7) = \underline{(6r + 7)(2x - 3y)}$

c) $4e(11n - 8m) - 9(8m - 11n) = \underline{(11n - 8m)(4e + 9)}$

5) Řešte rovnice

a) $8x + 3 = 5x + 15 \quad / -3; -5x$

$$8x - 5x = 15 - 3$$

$$3x = 12 \quad / :3$$

$$\underline{x = 4}$$

b) $6y - 2 = 7 - 3y \quad / +2; +3y$

$$6y + 3y = 7 + 2$$

$$9y = 9 \quad / :9$$

$$\underline{y = 1}$$

c) $12 + 2y = 5y + 27 \quad / -12; -5y$

$$2y - 5y = 27 - 12$$

$$-3y = 15 \quad / :(-3)$$

$$\underline{y = -5}$$

d) $3,2 + 3u = 9u - 13 \quad / -3,2; -9u$

$$3u - 9u = -13 - 3,2$$

$$-6u = -16,2 \quad / :(-6)$$

$$\underline{u = 2,7}$$

e) $4z + 3 = 9z - 2 \quad / -3; -9z$

$$4z - 9z = -2 - 3$$

$$-5z = -5 \quad / :(-5)$$

$$\underline{z = 1}$$

f) $4 - 3e = 5e + 20 \quad / -4; -5e$

$$-3e - 5e = 20 - 4$$

$$-8e = 16 \quad / :(-8)$$

$$\underline{e = -2}$$

g) $2p + 7 = 7p - 8 \quad / -7; -7p$

$$2p - 7p = -8 - 7$$

$$-5p = -15 \quad / :(-5)$$

$$\underline{p = 3}$$

h) $16c - 12 = 37 + 2c \quad / +12; -2c$

$$16c - 2c = 37 + 12$$

$$14c = 49 \quad / :14$$

$$c = \frac{49}{14}$$

$$c = \frac{7}{2} = 3,5$$

6) Řešte rovnice

a) $11 + 9x = 8x + 9 \quad / -11; -8x$

$$9x - 8x = 9 - 11$$

$$\underline{x = -2}$$

b) $16 - 5k = 3k + 4 \quad / -16; -3k$

$$-5k - 3k = 4 - 16$$

$$-8k = -12 \quad / :(-8)$$

$$k = \frac{12}{8}$$

$$k = \frac{3}{2} = 1,5$$

c) $7 + z = 19 - 4z \quad / -7; +4z$

$$z + 4z = 19 - 7$$

$$5z = 12 \quad / :5$$

$$z = \frac{12}{5} = 2,4$$

d) $16 + 7x = 4x + 22 \quad / -16; -4x$

$$7x - 4x = 22 - 16$$

$$3x = 6 \quad / :3$$

$$\underline{x = 2}$$

e) $19y + 2 = 2y + 19 \quad / -2; -2y$

$$19y - 2y = 19 - 2$$

$$17y = 17 \quad / :17$$

$$\underline{y = 1}$$

f) $2x + 3 = 30 - x \quad / -3; +x$

$$2x + x = 30 - 3$$

$$3x = 27 \quad / :3$$

$$\underline{x = 9}$$