

Pracovní list

Předmět: Matematika

Ročník: 8.

Opakování vzdělávacího celku: výrazy

7) Zjednodušte:

a) $(2a + 3b - 4) + (5a - 6b + 1) + (-3a - 6b - 6) = 2a + 5a - 3a + 3b - 6b - 6b - 4 + 1 - 6 = \mathbf{4a - 9b - 9}$

b) $(k - 3) + (5k + 9) + (7k + 1) = \mathbf{13k + 7}$

c) $(7m + n - 8) + (4m - 5n + 5) + (7m - 2n - 2) = \mathbf{18m - 6n - 5}$

d) $(-5p - 6u + 3) + (7p + 3u) + (4u - 9) = \mathbf{2p + u - 6}$

e) $(s + h - 1) + (-2h + 6s + 5) + (h - 6) = \mathbf{7s - 2}$

f) $(6t - 5w + 9) + (5w - 11t - 7) = \mathbf{2 - 5t}$

g) $(7o - 9p + 11) + (7o + 6p - 12) + (2p - 2o + 2) = \mathbf{12o - p + 1}$

h) $(4y - 9k + h - 9) + (h - k + 4y) + (6y - 5k + 8h - 5) = \mathbf{14y - 15k + 10h - 14}$

8) Zjednodušte:

a) $(6q - 2a + 9) + (7q - 3a - 8) + (4q - 4a + 5) = \mathbf{17q - 12a + 6}$

b) $(11o + 18p) + (31o - 6p) = \mathbf{42o + 12p}$

c) $(3u + 9j - 5f + 6) + (11u - 5j + 6f - 9) + (6u + 4j - 9f + 11) = \mathbf{20u + 8j - 8f + 8}$

d) $(9p - 6d + 3) + (5d + 3v - 9) + (5p + 6v - 11) = \mathbf{14p - d - 17 + 9v}$

e) $(8r - 6z + 4) + (6w + 7r + 3) + (5w - z) = \mathbf{15r - 7z + 7 + 11w}$

f) $(8o - 9p + k - 6) + (7o - p + 9k - 1) + (5o - 3p + 9k) + (2p - o + 6k - 9) = \mathbf{19o - 11p + 25k - 16}$

g) $(4u - 5v - 6d - 5) + (-6u + 9v - 8d + 8) + (-8u + 6v - 6d - 15) = \mathbf{-10u + 10v - 20d - 12}$

h) $(11t - 2s + 2u - 2) + (-8t + 5s + 6u) + (9t - 10s + 9u - 14) = \mathbf{12t - 7s + 17u - 16}$

9) Zjednodušte:

a) $(14a - 5b + 3d + 6) + (5a - 9b + 3c) + (-c + a - 2b - 9k) = \mathbf{20a - 16b + 2c + 3d + 6 - 9k}$

b) $(9p + 5m + 3) + (6p - 9m + 9) + (10p - 13m - 15) + (-p + m - 2) = \mathbf{24p - 16m - 5}$

c) $(2a + 3b - 4) - (5a - 6b + 1) - (-3a - 6b - 6) = \mathbf{15b + 1}$

d) $-(k - 3) - (5k + 9) - (7k + 1) = \mathbf{-13k - 7}$

e) $(7m + n - 8) - (4m - 5n + 5) - (7m - 2n - 2) = \mathbf{-4m + 8n - 11}$

f) $(-5p - 6u + 3) - (7p + 3u) - (4u - 9) = \mathbf{-12p - 13u + 12}$

g) $-(s + h - 1) - (-2h + 6s + 5) - (h - 6) = \mathbf{-7s + 2}$

h) $-(6t - 5w + 9) - (5w - 11t - 7) = \mathbf{5t - 2}$

10) Zjednodušte:

a) $-(7o - 9p + 11) - (7o + 6p - 12) - (2p - 2o + 2) = \mathbf{-12o + p - 1}$

b) $-(4y - 9k + h - 9) - (h - k + 4y) - (6y - 5k + 8h - 5) = \mathbf{-14y + 15k - 10h + 14}$

c) $-(6q - 2a + 9) - (7q - 3a - 8) - (4q - 4a + 5) = \mathbf{-17q + 9a - 6}$

d) $(11o + 18p) - (31o - 6p) = \mathbf{-20o + 24p}$

e) $(3u + 9j - 5f + 6) - (11u - 5j + 6f - 9) - (6u + 4j - 9f + 11) = \mathbf{-13u + 10j - 2f + 4}$

f) $-(9p - 6d + 3) - (5d + 3v - 9) - (5p + 6v - 11) = \mathbf{-14p + d + 17 - 9v}$

11) Zjednodušte:

- a) $(8r - 6z + 4) - (6w + 7r + 3) - (5w - z) = \mathbf{r-5z+1-11w}$
 b) $(8o - 9p + k - 6) - (7o - p + 9k - 1) - (5o - 3p + 9k) - (2p - o + 6k - 9) = \mathbf{-3o-7p-23k+4}$
 c) $-(4u - 5v - 6d - 5) - (-6u + 9v - 8d + 8) - (-8u + 6v - 6d - 15) = \mathbf{10u-10v+20d+12}$
 d) $(11t - 2s + 2u - 2) - (-8t + 5s + 6u) - (9t - 10s + 9u - 14) = \mathbf{10t+3s-13u+12}$
 e) $-(14a - 5b + 3d + 6) - (5a - 9b + 3c) - (-c + a - 2b - 9k) = \mathbf{-20a+16b-2c+9k-6}$
 f) $-(9p + 5m + 3) - (6p - 9m + 9) - (10p - 13m - 15) - (-p + m - 2) = \mathbf{-24p+16m+5}$

12) Zjednodušte:

- a) $4 - (x - 1) + (x + 2) - 5x - 9 + (3x - 4) = \mathbf{-6-2x}$
 b) $7m - (2 - 2m) - (3m + 5) - 8 + (6 + 3m) = \mathbf{9m-9}$
 c) $4a - 11 - (5a + 4) - (-3 - 4a) + a = \mathbf{4a-12}$
 d) $y - (2y - 5) + (6 - y) - (-9 - 2y) - y = \mathbf{-y+20}$
 e) $-3 - (-2 - 7t) - (-t + 6) + (3 - 5t) - 10t = \mathbf{-4-7t}$

Další informace najdeš v učebnici nebo sešitě.

Vypracoval: Mgr. Jaroslav Fránek