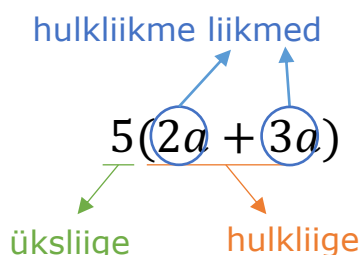


ÜKSLEIKME KORRUTAMINE HULKLEIKMEGA



1. Ava sulud.

Korruta sulgude ees oleva üksliikmega kõik hulkliikme liikmed.

$$\begin{aligned} 5(2a - 4a + 3a^2) &= \\ &= 5 \cdot 2a + 5 \cdot (-4a) + 5 \cdot 3a^2 = \\ &= \underline{10a} - \underline{20a} + \underline{15a^2} = \end{aligned}$$

2. Koonda hulkliige.

$$= -10a + 15a^2 =$$

3. Korrasta hulkliikme järjekord.

$$= 15a^2 - 10a$$

NÄHTAMATU
MATEMAATIKA

Miinusmärk sulu ees on tegelikult kordaja -1.

Miinusmärk sulu ees muudab märki sulu sees!

$$-(2x^2 - 5x^2) = (-1) \cdot 2x^2 + (-1) \cdot (-5x^2) = -2x^2 + 5x^2 = 3x^2$$

Veel näiteid:

$$2(2x - 5) = 4x - 10$$

$$-(x - 3) = -x + 3$$

$$(2a - 1 + 3a) \cdot (-5) = \underline{-10a} + \underline{5} - 15a = -25a + 5$$

$$5(-2a + 3) - 4(a^2 + 6) = \underline{-10a} + \underline{15} - \underline{4a^2} - \underline{24} = -10a - 9 - 4a^2 = -4a^2 - 10a - 9$$

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

ÜKSLEIKME KORRUTAMINE HULKLEIKMEGA

22. Kirjuta üksliikme ja hulkliikme liikmete korrutised.

Näide:

$$3(4y + 2) = 3 \cdot \underline{4y} + 3 \cdot \underline{2}$$

A. $5(2x + 1) = 5 \cdot \underline{\hspace{1cm}} + 5 \cdot \underline{\hspace{1cm}}$

B. $-2(3y + 5) = (-2) \cdot \underline{\hspace{1cm}} + (-2) \cdot \underline{\hspace{1cm}}$

C. $(3 - 2) \cdot x = \underline{\hspace{1cm}} \cdot x + \underline{\hspace{1cm}} \cdot x$

D. $5(3x - x + 2) = 5 \cdot \underline{\hspace{1cm}} + 5 \cdot \underline{\hspace{1cm}} + 5 \cdot \underline{\hspace{1cm}}$

E. $-3(m^2 - 2m + 5) = (-3) \cdot \underline{\hspace{1cm}} + (-3) \cdot \underline{\hspace{1cm}} + (-3) \cdot \underline{\hspace{1cm}}$

23. Kirjuta üksliikme ja hulkliikme liikmete korrutised.

Näide:

$$2(5y + 4) = \underline{2} \cdot 5y + \underline{2} \cdot 4$$

A. $4(3x + 2) = \underline{\hspace{1cm}} \cdot 3x + \underline{\hspace{1cm}} \cdot 2$

B. $-(2y + 4y) = \underline{\hspace{1cm}} \cdot 2y + \underline{\hspace{1cm}} \cdot 4y$

C. $(5 - 2) \cdot 3x = 5 \cdot \underline{\hspace{1cm}} + (-2) \cdot \underline{\hspace{1cm}}$

D. $-2(4x - x + 3) = \underline{\hspace{1cm}} \cdot 4x + \underline{\hspace{1cm}} \cdot (-x) + \underline{\hspace{1cm}} \cdot 3$

E. $-5(a^2 - 4a + 3) = \underline{\hspace{1cm}} \cdot a^2 + \underline{\hspace{1cm}} \cdot (-4a) + \underline{\hspace{1cm}} \cdot 3$

24. Kirjuta üksliikme ja hulkliikme liikmete korrutised.*Näide:*

$$4(4a + 2) = \underline{4 \cdot 4a} + \underline{4 \cdot 2}$$

A. $a(5 + 3) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

B. $-x(y + 6) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

C. $-4m(m - 5) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

D. $x(x - 3x + 3) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

E. $-3y(y^2 - 2y - 7) = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

25. Arvuta eelmise ülesande korrutiste vastused.*Näide:*

$$4(4a + 2) = \underline{16a + 8}$$

A. $a(5 + 3) = \underline{\hspace{2cm}}$

B. $-x(y + 6) = \underline{\hspace{2cm}}$

C. $-4m(m - 5) = \underline{\hspace{2cm}}$

D. $x(x - 3x + 3) = \underline{\hspace{2cm}}$

E. $-3y(y^2 - 2y - 7) = \underline{\hspace{2cm}}$

Tuleta meelde!**Astmete korrutamine:**

$$x^3 \cdot x^2 = x^{3+2} = x^5$$

26. Korruta.*Näide:*

$$3(2x + 2) = \underline{6x + 6}$$

$$A. 2(2x + 4) = \underline{\hspace{2cm}}$$

$$B. 5(2a - 1) = \underline{\hspace{2cm}}$$

$$C. -5m(3m + 2) = \underline{\hspace{2cm}}$$

$$D. 3(y^2 - 2y) = \underline{\hspace{2cm}}$$

$$E. -2a(3a + 2ab) = \underline{\hspace{2cm}}$$

27. Korruta.**Kirjuta lõppvastus korrastatud kujul.***Näide:*

$$3x(2 - 3x) = \underline{6x - 9x^2} = \underline{-9x^2 + 6x}$$

$$A. -(3b + 4a) = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$B. 4(2a - 5a^2) = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$C. -5m(3m + 2 - m^2) = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$D. 8(x^2 - 2y + 3x) = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$E. a(3a^2 + 2b - 4a) = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

28. Korruta.

Koonda hulkliige.
Vajadusel korrasta lõppvastus.

Näide:

$2(x + 2) + 3(2 + x) = 2x + 4 + 6 + 3x = 5x + 10$

A. $x(3 + x) + 2(x + 5) =$

B. $2x(x + 5) + 3(x + 1) =$

C. $3(a + 3a) + (a + a^2) \cdot 6 =$

D. $-2(y + 7) - 2(1 - y) =$

E. $-5(2 - x) + (3x + 6) \cdot 3x =$

F. $2y(x + y - 1) + (x^2 + y^2 + 1) \cdot 3 =$

G. $-6x(2x^2 - 3x) + 3(x + 4x^2) - x(-3 + 4x) =$

Vastused:

$3x^2 + 2xy + 5y^2 - 2y + 3$ $6a^2 + 18a$ $-16x - 28$ $2x + 5x^2 + 10$

$-12x^3 + 26x^2 + 6x$ $3a^2 + 12a$ -16 $16x + 28$

$2x^2 + 13x + 3$ $9x^2 + 23x - 10$ $x^2 + 5x + 10$ $-y - 16$

$x^2 + 2xy + 3y^2 + 2y - 1$