

Alıřtırmalar ve Problemler – 1.3

1. Her maddede ilk polinom bölüm, ikincisi kalandır.

a. $-2x^3 - \frac{3}{2}x^2 + 3$; 0 b. 2; $4x - 3$

c. $\frac{3}{2}$; $-\frac{17}{2}$ d. 0; $2x + 3$ e. 1; $x - 8$

f. $2x^2 - \frac{9}{2}x + \frac{37}{4}$; $-\frac{115}{4}$

g. $x + 4$; $-2x - 10$ h. $2x^2 - 1$; 0

i. $2x^3 - 2x - 2$; $5x^2 + 3x + 3$

j. $x^2 + 1$; $-6x^2 + 2$ k. $-2x^2 - \frac{9}{2}$; $-\frac{15}{2}x$

l. $x^6 - 2x^4 + 8x^2 - 16$; 29

m. $x^2 - 5xy + 12y^2$; $-25y^3$

n. x^4 ;

m ve n'de, polinomlar $R_{[x]}$ 'in elemanları olarak düşünölmüřtür.

2. a. $x^2 + x - 1$ b. $x^2 - 1$
c. $x^2 - x$ d. $x^2 + 1$

3. a. 0 b. 9 c. $7 + \sqrt{2}$ d. $17 - 5\sqrt{3}$

e. $\frac{379}{32}$ f. $-\frac{9}{32}$ g. $x + 7$ h. $11x + 17$

i. $-3x - 1$ j. $27x - 1$ k. $3x^2 + 5x - 4$

l. $2x^2 - x - 1$ m. $47x + 19$ n. $3x^2 - 3$

o. $-2x^3 - 2x^2 - x - 1$ p. $-4x^2 + 5x - 1$

4. a. $a = \frac{3}{4}$ b. $m = -10$

c. $m = -7$ d. $(a, b) = (2, 1)$

e. $(m, n) = (1, -1)$ f. $(a, b) = (-2, 0)$

g. $(a, b, c) = (2, 6, 0)$ h. $(a, b, c) = \left(\frac{-3}{2}, 4, 0\right)$

i. $(a, b) = (1, -4)$ j. $(m, n) = (-1, -4)$

k. $(a, b) = (1, 0)$ l. $(a, b, c) = \left(\frac{1}{5}, \frac{4}{5}, 0\right)$

m. $(a, b, c) = (-4, 2, -12)$

n. $(a, b, c, d) = (0, -2, 0, 0)$

5. Her maddede ilk polinom bölüm, ikincisi kalandır.

a. $x^4 + x^3 + 3x^2 - 1$; -2

b. $x^3 + x^2 + 5x + 4$; $13x + 7$

c. $x^3 - 2x^2 + 6x - 15$; $29x - 1$

d. $x^3 - x^2 + 9x - 18$; $71x - 109$

e. $x^2 + 11$; $-3x^2 + 98x - 1$

f. $x^2 + 2x + 7$; $11x^2 + 2x - 15$

g. $x^3 + 4x^2 + 14x + 37$; $91x - 149$

h. $x^2 - 3x + 8$; $-19x^2 - 22x - 9$

i. $x + 4$; $12x^3 + 49x^2 + 66x + 27$

j. $x^2 - 5x + 19$; $-62x^2 - 133x - 77$

k. $x - 2$; $5x^3 - x^2 - x - 1$

h. 1; $-x^4 + 4x^3 - x^2 - 2x - 2$

6. Her maddede ilk polinom bölüm, ikincisi kalandır.

a. $x^2 + 8x + 20$; 57

b. $x^3 - 8x^2 + 19x - 37$; 76

c. $x^3 + \frac{5}{2}x^2 + \frac{19}{4}x + \frac{115}{8}$; $\frac{623}{8}$

d. $2x^4 - x + 1$; -3

e. $x^2 + 3x + 12$; $47x - 73$

f. $x^3 - 5x^2 + 19x - 65$; $215x^2 + 390x$

g. $x^2 + 3x + 20$; $62x^2 + 131x - 482$

h. $x^2 - 3x + 16$; $-60x^2 + 72x + 128$

7. Her maddede ilk polinom bölüm, ikincisi kalandır.

a. $x^2 + 8x + 20$; 57

b. $x^3 - 8x^2 + 19x - 37$; 76

c. $x^3 + \frac{5}{2}x^2 + \frac{19}{4}x + \frac{115}{8}$; $\frac{623}{8}$

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h. $x^2 - 3x + 16$; $-60x^2 + 72x + 128$

x ≥ 3 iken;

$$\begin{aligned} |7 - |x - 3|| = 5 &\Rightarrow |10 - x| = 5 \\ &\Rightarrow 10 - x = -5 \text{ veya } 10 - x = 5 \\ &\Rightarrow x = 15 \text{ veya } x = 5 \text{ bulunur.} \end{aligned}$$

$$C_2 = \{5, 15\}$$

$$C = C_1 \cup C_2 \Rightarrow C = \{1, 5, 15\} \text{ olur.}$$

I. x < $\frac{1}{2}$ iken;

$$\begin{aligned} ||2x - 1| - 5| \geq 4 &\Rightarrow |-2x - 4| \geq 4 \\ &\Rightarrow -2x - 4 \leq -4 \text{ veya } -2x - 4 \geq 4 \\ &\Rightarrow x \geq 0 \text{ veya } x \leq -4 \text{ bulunur.} \end{aligned}$$

$$C_1 = (-\infty; -4] \cup \left[0; \frac{1}{2}\right) \text{ dir.}$$

x ≥ $\frac{1}{2}$ iken;

$$\begin{aligned} ||2x - 1| - 5| \geq 4 &\Rightarrow |2x - 6| \geq 4 \\ &\Rightarrow 2x - 6 \leq -4 \text{ veya } 2x - 6 \geq 4 \\ &\Rightarrow x \leq 1 \text{ veya } x \geq 5 \text{ bulunur.} \end{aligned}$$

b. x ≠ 0

$$\Rightarrow \frac{x}{x} = x \cdot x^{-1} \quad (\text{Bölme t.})$$

$$\Rightarrow \frac{x}{x} = 1 \quad (\text{Ak. - I.9})$$

c. x + (y - x) = x + [y + (-x)] (Çıkarma t.)

$$\Rightarrow x + (y - x) = x + y + (-x) \quad (\text{Ak. - I.5})$$

$$\Rightarrow x + (y - x) = x + (-x) + y \quad (\text{Ak. - I.2})$$

$$\Rightarrow x + (y - x) = y \quad (\text{Ak. - I.4 ve Ak. - I.3})$$

d. x ≠ 0

$$\Rightarrow x \cdot \left(\frac{y}{x}\right) = x \cdot (y \cdot x^{-1}) \quad (?)$$

$$\Rightarrow x \cdot \left(\frac{y}{x}\right) = x \cdot x^{-1} \cdot y \quad (?)$$

$$\Rightarrow x \cdot \left(\frac{y}{x}\right) = y \quad (?)$$

İşlemleri dayandırdığımız aksiyom ya da teoremleri siz belirtiniz.

e. z ≠ 0 ve x = $\frac{y}{z}$

$$\Leftrightarrow x = y \cdot z^{-1} \quad (?)$$

$$\Leftrightarrow x \cdot z = y \cdot z^{-1} \cdot z \quad (?)$$

$$\Leftrightarrow x \cdot z = y \quad (?)$$

f. x - y = z

$$\Leftrightarrow x + (-y) + y = z + y \quad (?)$$

$$\Leftrightarrow x = y + z \quad (?)$$

g. -(a - b + c)

$$= (-1) \cdot [a + (-b) + c] \quad (?)$$

$$= (-1) \cdot a + (-1) \cdot (-b) + (-1) \cdot c \quad (?)$$

$$= -a + b - c \quad (?)$$

h. (a + b)(a - b) = (a + b)[a + (-b)]

$$\Rightarrow (a + b)(a - b) = (a + b) \cdot a + (a + b) \cdot (-b)$$

$$\Rightarrow (a + b)(a - b) = a^2 + ab - ab - b^2$$

$$\Rightarrow (a + b)(a - b) = a^2 - b^2$$

i, j, k, l eşitliklerinin geçerliliğini siz gösteriniz.

m. (a - b)(aⁿ⁻¹ + aⁿ⁻²b + ... + a · bⁿ⁻² + bⁿ⁻¹)

$$= a^n + a^{n-1}b + a^{n-2}b^2 + \dots + ab^{n-1}$$

$$- a^{n-1}b - a^{n-2}b^2 - \dots - ab^{n-1} - b^n$$

$$= a^n - b^n$$

Etkinlik - 4.216

$$ax + b = c$$

$$\Rightarrow ax + b + (-b) = c + (-b)$$

$$\Rightarrow ax = c + (-b)$$

$$\Rightarrow a^{-1} \cdot a \cdot x = a^{-1} \cdot (c + (-b))$$

$$\Rightarrow x = \frac{c - b}{a}$$

$$\Rightarrow C = \left\{ \frac{c - b}{a} \right\}$$

Etkinlik - 4.217

Gerçek sayılar kümesinde, rasyonel sayılar kümesindeki aksiyomlar geçerlidir. Bu yüzden, önceden bildiğimiz işlem kolaylıklarını kullanabiliriz.

a. ab + bc = ac

$$\Rightarrow ab - ac = -bc$$

$$\Rightarrow a(b - c) = -bc$$

$$\Rightarrow a = \frac{bc}{c - b}$$

$$\text{b. } \frac{1}{a} = \frac{1}{b} + \frac{1}{c}$$

$$\Rightarrow \frac{1}{a} = \frac{b+c}{bc} \Rightarrow a = \frac{bc}{b+c}$$

$$\text{c. } \frac{a+b}{c} = \frac{a+b}{b}$$

$$\Rightarrow ab + b^2 = ac + c^2$$

$$\Rightarrow a(b - c) = c^2 - b^2$$

$$\Rightarrow a(b - c) = -(b - c)(b + c)$$

$$\Rightarrow a = -b - c$$

$$\text{d. } (a^2 + ac)(ab + c) = 0$$

$$\Rightarrow a(a+c)(ab+c) = 0$$

$$\Rightarrow (a = 0) \vee (a + c = 0) \vee (ab + c = 0)$$

$$\Rightarrow (a = 0) \vee (a = -c) \vee \left(a = \frac{-c}{b}\right)$$

$$\text{e. } ab - c(ab - c) = (d - a) \cdot d - a$$

$$\Rightarrow ab - abc + c^2 = d^2 - ad - a$$

$$\Rightarrow a(b - bc + d + 1) = d^2 - c^2$$

$$\Rightarrow a = \frac{d^2 - c^2}{b - bc + d + 1}$$

$$\text{f. } (a - b)(ab - c) = (a - b)^2$$

$$\Rightarrow (a - b)(ab - c) - (a - b)^2 = 0$$

$$\Rightarrow (a - b)(ab - c - a + b) = 0$$

$$\Rightarrow (a - b)[a(b - 1) - c + b] = 0$$

$$\Rightarrow (a = b) \vee \left(a = \frac{c - b}{b - 1}\right)$$

Etkinlik - 4.218

$$x, y \in \mathbb{R}^+ \text{ ve } x^2 < y^2$$

$$\Leftrightarrow x^2 - y^2 < 0$$

$$\Leftrightarrow (x - y)(x + y) < 0$$

$$\Leftrightarrow x - y < 0$$

$$\Leftrightarrow x < y$$

Etkinlik - 4.219

$$ab - cd = 1$$

$$\Rightarrow (a - b)^2 + (c + d)^2 + (a + c)^2 + (b + d)^2 \geq 0$$

$$\Rightarrow a^2 - 2ab + b^2 + c^2 + 2cd + d^2 + a^2 + 2ac + c^2 + b^2 + 2bd + d^2 \geq 0$$

$$\Rightarrow 2(a^2 + b^2 + c^2 + d^2 - \underbrace{ab + cd}_{-1} + ac + bd) \geq 0$$

$$\Rightarrow a^2 + b^2 + c^2 + d^2 + ac + bd \geq 1$$

Etkinlik - 4.220

$$\text{a. } \mathbb{C}_Q = \{x \mid -3 \leq x < 4, x \in \mathbb{Q}\}$$

$$\mathbb{C}_R = \{x \mid -3 \leq x < 4, x \in \mathbb{R}\}, \mathbb{C}_Q \neq \mathbb{C}_R$$

$$\text{b. } x - 3 \leq 5x - 11 < 2x + 7$$

$$\Rightarrow \left. \begin{array}{l} x - 3 \leq 5x - 11 \\ 5x - 11 < 2x + 7 \end{array} \right\} \Rightarrow x \geq 2 \text{ ve } x < 6$$

$$\Rightarrow 2 \leq x < 6 \text{ bulunur.}$$

$$\mathbb{C}_Q = \{x \mid 2 \leq x < 6, x \in \mathbb{Q}\}$$

$$\mathbb{C}_R = \{x \mid 2 \leq x < 6, x \in \mathbb{R}\}$$

$$\text{c. } 4 < x < 10$$

$$\text{d. } -2 < x < 2$$

$$\text{e. } 2x - 1 \leq 7 < 4x + 3 \text{ veya } 1 \leq 2x - 3 < 7$$

$$\Rightarrow [(2x - 1 \leq 7) \text{ ve } (7 < 4x + 3)] \text{ veya}$$

$$4 \leq 2x < 10$$

$$\Rightarrow (x \leq 4 \text{ ve } x > 1) \text{ veya } (2 \leq x < 5)$$

$$\Rightarrow (1 < x \leq 4) \text{ veya } (2 \leq x < 5)$$

$$\Rightarrow 1 < x < 5$$

$$\text{f. } 2x - 3 < x + 2 \leq 3x + 6 \text{ ve } -5 < 3x - 2 \leq 16$$

$$\Rightarrow \left. \begin{array}{l} 2x - 3 < x + 2 \\ x + 2 \leq 3x + 6 \\ -5 < 3x - 2 \leq 16 \end{array} \right\}$$

$$\Rightarrow (x < 5) \text{ ve } (x > -2) \text{ ve } (-1 < x \leq 6)$$

$$\Rightarrow -1 < x < 5$$

Etkinlik - 4.221

$$\text{a. } -4 \leq x \leq -1$$

$$\Rightarrow 12 \geq -3x \geq 3 \Rightarrow 14 \geq 2 - 3x \geq 5 \text{ olur.}$$

$$\{5, 6, 7, 8, 9, \dots, 14\}$$

$$\text{b. } -3 < y \leq 4 \Rightarrow -6 < 2y \leq 8$$

$$\Rightarrow -3 < 2y + 3 \leq 11 \text{ olur.}$$

$$\{-2, -1, 0, 1, 2, \dots, 11\}$$

$$\text{c. } \left. \begin{array}{l} -4 \leq x \leq -1 \\ -3 < y \leq 4 \end{array} \right\} \Rightarrow \left. \begin{array}{l} -8 \leq 2x \leq -2 \\ -12 \leq -3y < 9 \end{array} \right\}$$

$$\Rightarrow -20 \leq 2x - 3y < 7 \text{ olur.}$$

$$\{-20, -19, -18, \dots, 6\}$$

$$\text{d. } \left. \begin{array}{l} -4 \leq x \leq -1 \\ -3 < y \leq 4 \end{array} \right\} \Rightarrow \left. \begin{array}{l} 0 \leq x^2 \leq 16 \\ -8 \leq -2y < 6 \end{array} \right\}$$

$$\Rightarrow -8 \leq x^2 - 2y < 22 \text{ olur.}$$

$$\{-8, -7, -6, \dots, 20, 21\}$$

$$\text{e. } \left. \begin{array}{l} -4 \leq x \leq -1 \\ -3 < y \leq 4 \end{array} \right\} \Rightarrow \left. \begin{array}{l} 0 \leq x^2 \leq 16 \\ -16 \leq -y^2 \leq 0 \end{array} \right\}$$

$$\Rightarrow -16 \leq x^2 - y^2 \leq 16 \text{ olur.}$$

$$\{-16, -15, -14, \dots, 15, 16\}$$

$$\text{f. } xy + 2x = x(y + 2) \text{ dir.}$$

$$\left. \begin{array}{l} -4 \leq x \leq -1 \\ -1 < y + 2 \leq 6 \end{array} \right\} \Rightarrow -4 \cdot 6 \leq x(y + 2) < -4(-1)$$

$$\Rightarrow -24 \leq xy + 2x < 4 \text{ olur.}$$

$$\{-24, -23, -22, \dots, 2, 3\}$$

Etkinlik - 4.222

$$a + b \cdot \sqrt{2} = x \in \mathbb{Q} \text{ olsun.}$$

$$a + b\sqrt{2} = x \in \mathbb{Q}$$

$$\Rightarrow b\sqrt{2} = x - a \in \mathbb{Q}$$

$$\Rightarrow \sqrt{2} = \frac{x - a}{b} \in \mathbb{Q} \text{ olur.}$$

$$\sqrt{2} \notin \mathbb{Q} \text{ olduğundan bu bir çelişmedir.}$$

$$x \notin \mathbb{Q} \text{ dur.}$$

Etkinlik - 4.223

$$\text{a. } \frac{a}{b} \text{ indirgenemez bir kesir olmak üzere } \frac{a}{b} = \sqrt{3} \text{ olsun.}$$

$$\frac{a}{b} = \sqrt{3} \Rightarrow \left(\frac{a}{b}\right)^2 = 3$$

$$\Rightarrow \frac{a^2}{b^2} = 3 \Rightarrow a^2 = 3 \cdot b^2 \text{ olur.}$$

$$a^2 \text{ 3'ün katı ve } a \text{ da 3'ün katı olacağından } a = 3k (k \in \mathbb{Z}) \text{ yazılır.}$$

$$a = 3k (k \in \mathbb{Z})$$

$$\Rightarrow (3k)^2 = 3b^2 \Rightarrow 9k^2 = 3b^2$$

$$\Rightarrow b^2 = 3k^2 \text{ olur.}$$

Buna göre, $b = 3p (p \in \mathbb{Z})$ yazılabilir.

Bu durumda, $\frac{a}{b}$ kesri en azından 3 ile sadeleştirilebilen bir kesirdir.

Öyleyse; $\frac{a}{b} = \sqrt{3}$ olacak biçimde, indirgenemez bir $\frac{a}{b}$ kesri yazılamaz.

$\sqrt{3}$ sayısı rasyonel değildir.

b. a'daki yolla, siz yapınız.

c. a'daki yolla, siz yapınız.

$$\text{d. } \sqrt{2} + \sqrt{3} = x \in \mathbb{Q} \text{ olsun.}$$

$$\sqrt{2} + \sqrt{3} = x \in \mathbb{Q}$$

$$\Rightarrow (\sqrt{2} + \sqrt{3})^2 = x^2 \in \mathbb{Q}$$

$$\Rightarrow 5 + 2\sqrt{6} = x^2 \in \mathbb{Q}$$

$$\Rightarrow 2\sqrt{6} = x^2 - 5 \in \mathbb{Q}$$

$$\Rightarrow \sqrt{6} = \frac{x^2 - 5}{2} \in \mathbb{Q} \text{ bulunur.}$$

$\sqrt{6} \notin \mathbb{Q}$ olduğundan, bu bir çelişmedir.

$$\sqrt{2} + \sqrt{3} \notin \mathbb{Q} \text{ dur.}$$

Etkinlik - 4.224

$$\text{a. } \sqrt{54} = \sqrt{9 \cdot 6} = \sqrt{9} \cdot \sqrt{6} = 3\sqrt{6}$$

$$\text{b. } 2\sqrt{125} = 2 \cdot \sqrt{25 \cdot 5} = 2 \cdot 5\sqrt{5} = 10\sqrt{5}$$

$$\text{c. } 3\sqrt{124} = 3 \cdot \sqrt{4 \cdot 31} = 6\sqrt{31}$$

$$\text{d. } \sqrt{432} = \sqrt{4 \cdot 36 \cdot 3} = 2 \cdot 6 \cdot \sqrt{3} = 12\sqrt{3}$$

Etkinlik - 4.225

$$\text{a. } 6\sqrt{3}$$

$$\text{b. } 3\sqrt{2} - 7\sqrt{3}$$

$$\text{c. } 3\sqrt{10} - 6\sqrt{5}$$

$$\text{d. } 12\sqrt{15} - 6\sqrt{10}$$

Etkinlik - 4.226

$$\text{a. } \sqrt{6}(\sqrt{12} - \sqrt{27}) = \sqrt{6}(2\sqrt{3} - 3\sqrt{3})$$

$$= \sqrt{6} \cdot (-\sqrt{3}) = -3\sqrt{2}$$

$$\text{b. } 2\sqrt{3}(\sqrt{8} - \sqrt{6}) = 2\sqrt{3} \cdot 8 - 2\sqrt{3} \cdot 6 \\ = 4\sqrt{6} - 6\sqrt{2}$$

$$\text{c. } (\sqrt{2} - \sqrt{5})(\sqrt{6} + \sqrt{15}) \\ = \sqrt{12} + \sqrt{30} - \sqrt{30} - \sqrt{75} \\ = 2\sqrt{3} - 5\sqrt{3} = -3\sqrt{3}$$

$$\text{d. } (2\sqrt{5} - \sqrt{2})(2\sqrt{2} - \sqrt{5}) \\ = 4\sqrt{10} - 10 - 4 + \sqrt{10} = 5\sqrt{10} - 14$$

Etkinlik - 4.227

$$\text{a. } \frac{3\sqrt{14}}{\sqrt{21}} = \frac{3\sqrt{2} \cdot \sqrt{7}}{\sqrt{3} \cdot \sqrt{7}} = \frac{3\sqrt{6}}{3} = \sqrt{6}$$

$$\text{b. } \frac{2\sqrt{6}}{3\sqrt{2}} = \frac{2 \cdot \sqrt{2} \cdot \sqrt{3}}{3\sqrt{2}} = \frac{2\sqrt{3}}{3}$$

$$\text{c. } \frac{\sqrt{3} + 1}{\sqrt{3} - 1} = \frac{4 + 2\sqrt{3}}{(\sqrt{3})^2 - 1^2} = \frac{4 + 2\sqrt{3}}{2} = 2 + \sqrt{3}$$

$$\text{d. } \frac{2}{\sqrt{2}(\sqrt{2} - 1)} = \frac{2\sqrt{2}(\sqrt{2} + 1)}{2 \cdot 1} = 2 + \sqrt{2}$$

$$\text{e. } \frac{\sqrt{12}}{\sqrt{6} + 2} - \frac{6}{\sqrt{3}} = \frac{6\sqrt{2} - 4\sqrt{3}}{2} - \frac{6\sqrt{3}}{3} \\ = 3\sqrt{2} - 2\sqrt{3} - 2\sqrt{3} = 3\sqrt{2} - 4\sqrt{3}$$

$$\text{f. } \frac{4\sqrt{3}}{3 - \sqrt{3}} - \frac{2}{2 - \sqrt{3}} = \frac{12\sqrt{3} + 12}{6} - \frac{4 + 2\sqrt{3}}{1} \\ = 2\sqrt{3} + 2 - 4 - 2\sqrt{3} = -2$$

$$\text{g. } \sqrt{\frac{2}{5}} + \sqrt{\frac{5}{2}} + \frac{3}{\sqrt{10}} = \frac{\sqrt{2}}{\sqrt{5}} + \frac{\sqrt{5}}{\sqrt{2}} + \frac{3}{\sqrt{10}} \\ = \frac{2}{\sqrt{10}} + \frac{5}{\sqrt{10}} + \frac{3}{\sqrt{10}} = \frac{10}{\sqrt{10}} = \sqrt{10}$$

(Paydaları eşitlemek daha kolay geldi.)

$$\text{h. } \frac{\sqrt{3} - 1}{\sqrt{6} + \sqrt{3} - \sqrt{2} - 1} = \frac{\sqrt{3} - 1}{\sqrt{3}(\sqrt{2} + 1) - (\sqrt{2} + 1)} \\ = \frac{\sqrt{3} - 1}{(\sqrt{2} + 1)(\sqrt{3} - 1)} = \frac{1}{\sqrt{2} + 1} = \sqrt{2} - 1$$

Etkinlik - 4.228

$$\text{a. } A \cap B = [2; +\infty) \cap [-2; 6) \\ \Rightarrow A \cap B = [2; 6)$$

$$\text{b. } (A \cup C) \cap B = \{[2; +\infty) \cup [-1; 4)\} \cap [-2; 6) \\ \Rightarrow (A \cup C) \cap B = [-1; +\infty) \cap [-2; 6) \\ \Rightarrow (A \cup C) \cap C = [-1; 6)$$

$$\text{c. } A - B = [2; +\infty) - [-2; 6) \\ \Rightarrow A - B = [6; +\infty)$$

$$\text{d. } (B - C) \cap A = \{[-2; 6) - [-1; 4)\} \cap [2; +\infty) \\ \Rightarrow (B - C) \cap A = \{[-2; -1) \cup [4; 6)\} \cap [2; +\infty) \\ \Rightarrow (B - C) \cap A = [4; 6)$$