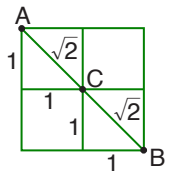
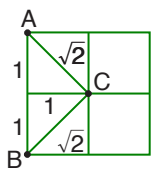
1. I.



$|AC| = \sqrt{2}, \quad |BC| = \sqrt{2}, \quad |AB| = 2\sqrt{2}$

$\Rightarrow |AC| = |BC| < |AB|$

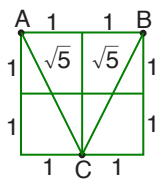
II.



$|AC| = \sqrt{2}, \quad |BC| = \sqrt{2}, \quad |AB| = 2$

$\Rightarrow |AC| = |BC| < |AB|$

III.



$|AC| = \sqrt{5}, \quad |BC| = \sqrt{5}, \quad |AB| = 2$

$|AB| < |BC| = |AC|$

O halde I ve II istenilen koşulu sağlar.

Cevap: C

2. • $a < b$ ve $\frac{1}{b} < \frac{1}{a}$ ise a ile b aynı işaretlidir.

• $a \cdot b \cdot c > 0$

1. durum + + +

2. durum − − +

$\Rightarrow a < b \Rightarrow a - b < 0$ olur.

c her iki durumda da pozitif o halde

$c.(a - b) < 0$ olur.

Cevap: D

3. $x + z > 11 \Rightarrow -x - z < -11$

$x + y < 20$

$+ \quad y + z < 41$

$2y < 50 \Rightarrow y < 25$

↳ en fazla 24 olur.

Cevap: C

4. • $m + n < m - n \Rightarrow n < -n \Rightarrow n < 0$ olur.

• $n^2 < m.n \Rightarrow n > m \quad (n < 0)$

• $n < 0$ ve $n > m$ ise $m < n < 0$ olur.

Cevap: D

5. $4 \le x < 5$

$8 < y \le 9$ 32, 36, 40, 45

$\Rightarrow 32 < x.y < 45$ olur.

Cevap: C

6. $2 < x < 3 \quad 3 < y < 4$

$+ \quad -4 < -y < -3$

$-2 < x - y < 0 \Rightarrow 0 \le (x - y)^2 < 4$ olur.

$\Rightarrow 0 \le \underbrace{x^2 - 2xy + y^2}_{\downarrow} < 4$

3 olabilir.

Cevap: A

7.
- $a - b < 0 \Rightarrow \boxed{a < b}$
- $a - c > b \Rightarrow a - b > c$
- $a - b < 0$ ve $a - b > c \Rightarrow c < 0$
- $a.\cancel{c} < \cancel{c}^2$ $(c < 0)$

$\boxed{a > c}$

O halde $c < a < b$ olur.

Cevap: A

8.
- $x + y = 0 \Rightarrow x = -y$
- $x.z < 0 \Rightarrow -y.z < 0$ ve $y.z > 0$
- $y.z > 0$ ve $y + z > 0 \Rightarrow y > 0$ ve $z > 0$
- $y > 0$ ve $x = -y$ ise $x < 0$

$\Rightarrow$ I. $x - z < 0$, $\underset{-}{x} < \underset{+}{z}$ doğru

II. $\underset{-}{x} < \underset{+}{y}$ doğru

III. $y.z > 0$ doğru

Cevap: E

9.
- $(x - y)^2 > (x + y)^2$

$x^2 - 2xy + y^2 > x^2 + 2xy + y^2$

$-2xy > 2xy$

$0 > 4xy \Rightarrow x.y < 0$

- $x.y.z < 0$ ve $x.y < 0$ ise $z > 0$
- $x + z < 0$ ve $z > 0$ ise $x < 0$
- $x.y < 0$ ve $x < 0$ ise $y > 0$

I. $x < 0$ doğru
II. $z > 0$ doğru
III. $y < z$ kesin doğru değil

O halde I ve II kesinlikle doğru

Cevap: C

10.
- $\underbrace{(x - m)^4}_{+}.\underbrace{(y - n)^3}_{-} < 0 \Rightarrow y - n < 0$ ve $y < n$
- $\underbrace{(y - m)^6}_{+}.\underbrace{(x - n)^5}_{+} > 0 \Rightarrow x - n > 0$ ve $x > n$
- $\underbrace{(y - n)^8}_{+}.\underbrace{(m - x)^7}_{+} > 0 \Rightarrow m - x > 0$ ve $m > x$

O halde, $y < n < x < m$ olur.

Cevap: D