

MUSTAQIL ISHLASH UCHUN MISOLLAR

1-masala.

Darajasi ≤ 5 bo'lgan ko'phad $P(x)$ uchun:

$$P(x+1) = P(x) \quad \text{barcha } x \text{ uchun}$$

Isbotlang:

$$P(x) \equiv \text{const}$$

2-masala.

$P(x)$ darajasi ≤ 6 bo'lib:

$$P(x) + P(-x) = 2x^4$$

barcha x uchun.

$P(x)$ ni toping.

3-masala.

Darajasi ≤ 4 bo'lgan ko'phad $P(x)$ uchun:

$$P(0) = 0, \quad P(1) = 1, \quad P(2) = 4, \quad P(3) = 9, \quad P(4) = 16$$

Toping $P(x)$.

4-masala.

$P(x)$ — darajasi n bo'lgan, yetakchi koeffitsiyenti 1.

Isbotlang:

$$|P(-1)| + |P(0)| + |P(1)| \geq 1$$

5-masala.

$$P(x) = a_0 + a_1x + \dots + a_nx^n,$$

$|a_i| \leq 2$ bo'lsa, isbotlang:

$$|P(1)| \leq 2(n+1)$$

6-masala

$P(x)$ — barcha koeffitsiyentlari musbat bo‘lgan ko‘phad.
Isbotlang:

$P(x) = 0$ tenglama musbat ildizga ega emas

7-masala.

$P(x)$ darajasi ≤ 5 bo‘lib:

$$P(x) = P(2-x)$$

bo‘lsa, $P(x)$ qanday ko‘rinishda bo‘ladi?

8-masala.

$a_n = P(n)$, bu yerda P — kvadrat ko‘phad.
Agar:

$$a_1 = 3, a_2 = 7, a_3 = 13$$

bo‘lsa, a_4 ni toping.

9-masala.

Darajasi ≤ 3 bo‘lgan ko‘phad mavjud emasligini ko‘rsating, agar:

$$P(0) = 0, P(1) = 0, P(2) = 1, P(3) = 1$$

10-masala.

$f : R \rightarrow R$ funksiya:

$$f(x+1) - f(x) = 2x + 1$$

va

$$f(0) = 1$$

Funksiyani toping.