

5. Test savollari (20 ta)

1. Arifmetik progressiyaning n -hadi formulasi qaysi?

A) $a_n = a_1 \cdot q^{n-1}$

B) $a_n = a_1 + nd$

C) $a_n = a_1 + (n - 1)d$

D) $a_n = a_1 - (n - 1)d$

2. Arifmetik progressiyada qaysi miqdor doimiy?

A) Hadlar nisbati

B) Hadlar yig'indisi

C) Ayirma

D) Hadlar ko'paytmasi

3. Geometrik progressiyada $b_1 = 3, q = 2$ bo'lsa, b_5 nechaga teng?

A) 24

B) 32

C) 48

D) 96

4. Arifmetik progressiyada $a_1 = 7, d = -3$ bo'lsa, a_4 ni toping.

A) -2

B) 1

C) -1

D) 4

5. Arifmetik progressiyaning dastlabki n hadlari yig'indisi formulasi qaysi?

A) $S_n = a_1 n$

B) $S_n = n(a_1 + a_n)/2$

C) $S_n = a_1(q^n - 1)/(q - 1)$

D) $S_n = n \cdot d$

6. Geometrik progressiyada qaysi shart bajarilganda cheksiz yig'indi mavjud?

A) $q > 1$

B) $q = 1$

C) $|q| < 1$

D) $q < 0$

7. Agar a, b, c arifmetik progressiya bo'lsa, qaysi tenglik to'g'ri?

A) $b^2 = ac$

B) $b = (a + c)/2$

C) $a + b = c$

D) $a = b = c$

8. Agar a, b, c geometrik progressiya bo'lsa, qaysi tenglik o'rinli?

A) $b = a + c$

B) $b^2 = a \cdot c$

C) $b = (a + c)/2$

D) $a^2 + c^2 = 2b^2$

9. Geometrik progressiyada $b_1 = 5, b_2 = 15$ bo'lsa, q nechaga teng?

A) $1/3$

B) 3

C) 5

D) 10

10. Arifmetik progressiyada $a_5 = 11$ va $a_1 = 3$ bo'lsa, d nechaga teng?

A) 2

B) 4

C) 8

D) 1

11. Arifmetik progressiyada musbat hadlar sonini aniqlashda qaysi formula ishlatiladi?

A) $a_n = a_1 \cdot q^{n-1}$

B) $a_n = a_1 + (n - 1)d$

C) $S_n = n(a_1 + a_n)/2$

D) $b_n = b_1 \cdot q^{n-1}$

12. Geometrik progressiyada $b_1 = 2, q = 1/2$ bo'lsa, b_4 nechaga teng?

A) $1/2$

B) $1/4$

C) $1/8$

D) 1

13. Cheksiz geometrik progressiyada $b_1 = 4, q = 1/2$ bo'lsa, yig'indi nechaga teng?

A) 6

B) 8

C) 4

D) 2

14. Arifmetik progressiyada $a_3 + a_7 = 20$ bo'lsa, a_5 nechaga teng?

A) 5

B) 8

C) 10

D) 12

- 15.** Geometrik progressiyada $b_2 = 6$ va $b_4 = 24$ bo'lsa, q ni toping.
- A) 2
 - B) $\sqrt{2}$
 - C) 4
 - D) 3
- 16.** Arifmetik progressiyada $d = 0$ bo'lsa, u qanday ketma-ketlik?
- A) Geometrik
 - B) O'suvchi
 - C) O'zgarmas
 - D) Kamayuvchi
- 17.** Geometrik progressiyada $q < 0$ bo'lsa, hadlar qanday bo'ladi?
- A) Faqat musbat
 - B) Faqat manfiy
 - C) Belgisi almashib boradi
 - D) Nolga teng
- 18.** Arifmetik progressiyada $a_1 = 1, a_n = 101$ va $n = 51$ bo'lsa, d nechaga teng?
- A) 1
 - B) 2
 - C) 4
 - D) 5
- 19.** Geometrik progressiyada $b_1 = 9$ va yig'indi $S = 12$ bo'lsa, q nechaga teng?
- A) $1/3$
 - B) $1/4$
 - C) $3/4$
 - D) $2/3$
- 20.** Olimpiada masalalarida progressiyalar bilan ishlashda eng muhim jihat qaysi?
- A) Formulani yodlash
 - B) Tez hisoblash
 - C) Yashirin progressiyani aniqlash
 - D) Kalkulyatordan foydalanish

Javoblar

1. **C**
2. **C**
3. **C**
4. **B**
5. **B**
6. **C**
7. **B**
8. **B**
9. **B**
10. **A**
11. **B**
12. **C**
13. **B**
14. **C**
15. **B**
16. **C**
17. **C**
18. **B**
19. **D**
20. **C**