11 sinf Geometriyadan 1 – BSB savollari

1. Uchlari $A(3;6;9)$, $B(9;3;6)$, $C(6;9;3)$ nuqtalarda bo‘lgan uchburchak perimetrini toping. **(10 ball)**

2. Agar $\vec{a} = -2\vec{\imath} + 6\vec{\jmath} - 4\vec{k}$ va $\vec{b} = -5\vec{\imath} + 3\vec{\jmath} + 7\vec{k}$ bo ‘lsa,

1) $\vec{c} = \vec{a} + 2\vec{b}$

2) $\vec{d} = 2\vec{a} + \vec{b}$ vektorlarning koordinatalari va uzunligini toping. **(12 ball)**

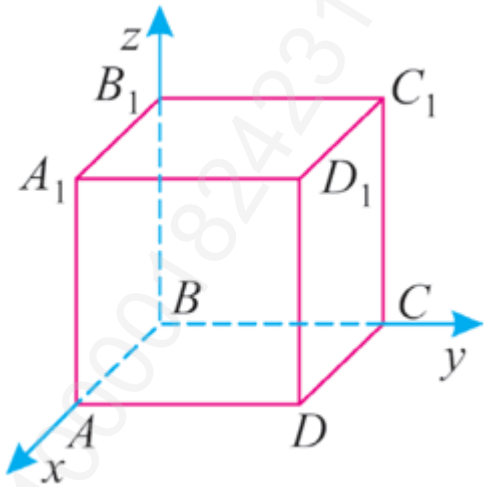
3. Rasmda tasvirlangan kub uchun quyidagilarni aniqlang: **(8 ball)**

1) $\overrightarrow{DB}$ vektorga teng vektorni;

2) $\overrightarrow{A_1D}$ vektorga qarama-qarshi vektorni;

3) $\overrightarrow{A_1B_1}$ vektorga kollinear barcha vektorlarni;

4) $\overrightarrow{B_1C_1}$ va $\overrightarrow{C_1D_1}$ vektorlar juftiga komplanar va teng vektorlarni.



4. $A(3;5;7)$, $B(6;4;2)$, $C(1;2;3)$ va $D(5;4;3)$ nuqtalar berilgan. $\overrightarrow{AB}$ va $\overrightarrow{DC}$ vektorlar orasidagi burchak kosinusini toping. **(12 ball)**

5. Parallel ko‘chirishda $A(-16;12;-10)$ nuqta $B(6;-3;4)$ nuqtaga o‘tadi. $C(15;17;-19)$ nuqta bu parallel ko‘chirishda D nuqtaga o‘tadi. D nuqta koordinatalarini toping. **(8 ball)**

Baholash mezoni

№	Ball	Javob	Deskriptor
1	10	$P = 9\sqrt{6}$	1) Ikki nuqta orasidagi masofani topish formulasini to‘g‘ri yoza olsa, **2 ball**; 2) Ikki nuqta orasidagi masofani topish formulasini yozib, shu formula bo‘yicha AB, BC va AC tomon uzunliklarini to‘g‘ri topsa har biri uchun **2 ball**dan jami **8 ball**; 3) AB, BC va AC tomon uzunliklarini to‘g‘ri topib, uchburchak perimetrini topsa, **10 ball**.
2	12	$\vec{c}(-12; 12; 10)$, $\lvert\vec{c}\rvert = 2\sqrt{97}$ $\vec{d}(-9; 15; -1)$, $\lvert d\rvert = \sqrt{307}$	1) $\vec{a}$ va $\vec{b}$ vektor koordinatalarini to‘g‘ri yoza olsa, har biriga **1 ball**dan jami **2 ball**; 2) $\vec{a}$ va $\vec{b}$ vektor koordinatalarini to‘g‘ri yozib, faqat $\vec{c}$ vektor koordinatasini topa olsa, **5 ball**; 3) $\vec{c}$ vektor koordinatasini to‘g‘ri topib, uning uzunligini to‘g‘ri topsa **7 ball**; 4) $\vec{a}$ va $\vec{b}$ vektor koordinatalarini to‘g‘ri yozib, faqat $\vec{d}$ vektor koordinatasini topa olsa, **5 ball**; 5) $\vec{d}$ vektor koordinatasini to‘g‘ri topib, uning uzunligini to‘g‘ri topsa **7 ball**; 6) $\vec{a}$ va $\vec{b}$ vektor koordinatalarini to‘g‘ri yozib, $\vec{c}$ va $\vec{d}$ vektor koordinatasi va uzunligini to‘g‘ri topsa, jami **12 ball**.
3	8	1) $\overrightarrow{D_1B_1}$ 2) $\overrightarrow{DA_1}$ 3) $\overrightarrow{AB}, \overrightarrow{A_1B_1}$, $\overrightarrow{D_1C_1}, \overrightarrow{DC}$. 4) $\overrightarrow{B_1C_1} = \overrightarrow{BC} = \overrightarrow{AD} = \overrightarrow{A_1D_1}$; $\overrightarrow{C_1D_1} = \overrightarrow{BA} = = \overrightarrow{CD} = \overrightarrow{B_1A_1}$	Har bir topshiriq uchun **2 ball**dan jami **8 ball**.
4	12	$\cos\alpha = -\frac{\sqrt{7}}{7}$	1) $\overrightarrow{AB}$ va $\overrightarrow{DC}$ vektorlar koordinatalarini to‘g‘ri topsa, har biriga **1 ball**dan jami **2 ball**; 2) $\overrightarrow{AB}$ va $\overrightarrow{DC}$ vektorlar koordinatalarini to‘g‘ri topib, faqat ularning skalyar ko‘paytmasini to‘g‘ri topsa, **6 ball**; **yoki** $\overrightarrow{AB}$ va $\overrightarrow{DC}$ vektorlar koordinatalarini to‘g‘ri topib, faqat ularning uzunliklarini to‘g‘ri topsa, har birining uzunligini to‘g‘ri topsa, **6 ball**; 3) $\overrightarrow{AB}$ va $\overrightarrow{DC}$ vektorlar koordinatalarini to‘g‘ri topib, ularning skalyar ko‘paytmasini va har birining uzunligini to‘g‘ri topsa, jami **10 ball**; 4) $\overrightarrow{AB}$ va $\overrightarrow{DC}$ vektorlar skalyar ko‘paytmasini va har birining uzunligini to‘g‘ri topib, orasidagi burchak kosinusini to‘g‘ri topsa, **12 ball**
5	8	$(37; 2; -5)$	1) Parallel ko‘chirish qanday vektor bo‘yicha bo‘lganini aniqlasa **2 ball;** 2) Parallel ko‘chirish qanday vektor bo‘yicha bo‘lganini aniqlab, D nuqta koordinatalaridan bittasini to‘g‘ri topsa, **4 ball**; ikkitasini to‘g‘ri topsa, **6 ball**; uchalasini ham to‘g‘ri topsa, **8 ball.**
Topshiriqlarni boshqa usullar bilan to‘g‘ri va to‘liq yechgan bo‘lsa, bu topshiriq uchun ajratilgan maksimal ballni berish mumkin			
Jami: **50**			