1.Teng yonli uchburchakning asosi 42 ga, uning asosiga tushirilgan balandligi esa asosi va yon tomonlarining o’rtalarini tutashtiruvchi kesmaning uzunligiga teng. Berilgan uchburchakning yuzini toping.

A)  B) C) 220,5 D) 441

2. Trapetsiya o’rta chizig’ining uzunligi 13ga, katta asosidagi burchaklari ga teng. Trapetsiya asoslari o’rtalarini tutashtiruvchi kesmaning uzunligi 7 ga teng. Trapetsiya kichik asosining uzunligini toping.

A) 4 B) 5 C) 6 D) 7

3. Uchburchakning 12 ga teng balandligi uning asos uzunligini 1:8 nisbatta bo’ladi. Shu parallel va uchburchakning yuzini teng ikkiga bo’ladigan tog’ri chiziq kesmaning uzunligini toping.

A) 6,5 B) 9 C) 8 D) 10,5

4.To’g’ri burchakli uchburchak katetlarining gipotenuzadagi proyeksiyalari 2 va 8 ga teng. Uchburchakning yuzini toping.
A) 40 B) 16 C) 10 D) 24 E) 20

5.Uchlari $M\left(-3;3;1\right)$; $N\left(3;-5;1\right)$ va $E\left(-4;-1;-2\right)$ nuqtalarda bo’lgan uchburchakning $MN$ tomoni va $EF$ medianasi orasidagi burchakni toping.
A) 60o B) $\arccos(0,75)$ C) 45o D) $\arccos(0,48)$
E) $\arccos(0,64)$

6.To’g’ri burchakli uchburchak o’tkir burchagining bissektrisasi (qarama-qarshi) katetni uzunliklari 4 va 5 ga teng bo’lgan, qismlarga ajratadi. Shu uchburchakning perimetrini toping.
A) $36$ B) $42$ C) 32 D) $45$ E) 40

7.Parallelogrammning diagonallari 6 sm va 16 sm, ular orasidagi burchak 30o. Parallelogrammning yuzini toping.
A) $24\sqrt{3}$ B) $12\sqrt{3}$ C) 48 D) 12 E) 24

8.Uchlari $A\left(3;-2;1\right)$; $B\left(3;0;2\right)$ va $C\left(1;2;5\right)$ nuqtalarda bo’lgan uchburchakning $BD$ medianasi va $AC$ tomoni orasidagi burchakning kattaligini toping.
A) 60o B) $\arccos(\frac{\sqrt{3}}{3})$ C) 45o D) $\arccos(\frac{\sqrt{2}}{3})$ E) 30o

9.$\vec{a}\left(1;2;-1\right)$ va $\vec{b}\left(2;2;0\right)$ vektorlar berilgan. $\vec{c}\left(x;y;-6\right)$ vektor $2\vec{b}-3\vec{a}$ vektorga collinear. $\left|\vec{c}\right|$ ning qiymatini hisoblang.
A) $2\sqrt{13}$ B) $\sqrt{158}$ C) $2\sqrt{14}$ D) 13 E) 8

10.Uchburchak ikkita burchagining qiymati nisbati 5:9 kabi, uchinchi burchagi shu burchaklarning kichigidan 10o ga kichik. Uchburchakning eng kichik burchagini toping.
A) 45o B) 20o C) 30o D) 50o E) 40o

11.To’g’ri burchakli uchburchakning gipotenuzasi 25 ga, katetlaridan biri $5\sqrt{11}$ ga teng. Ikkinchi katetning gipotenuzadagi proyeksiyasini toping.
A) $18$ B) $21$ C) 14 D) $20,4$ E) 15,5

12.Agar $\left|\vec{a}\right|=2$ , $\left|\vec{b}\right|=4$ va $\vec{a}$ va $\vec{b}$ vektorlar orasidagi burchak $\frac{π}{3}$ ga teng bo’lsa, $3\vec{a}-2\vec{b}$ va $5\vec{a}-6\vec{b}$ vektorlarning skalyar ko’paytmasini toping.
A) $252-56\sqrt{3}$ B) 140 C) 364 D) $252+56\sqrt{3}$ E) 264

13.Rombning tomoni 5 ga, diagnallaridan biri 8 ga teng. Rombning yuzini toping.
A) 30 B) 22 C) 24 D) 20 E) 28

14.Katetlaridan biri $4\sqrt{2}$ ga teng bo’lgan to’g’ri burchakli uchburchak gipotenuzasining ikkinchi katetga nisbati 5:3 ga teng. Uchburchakning yuzini toping.
A) 20 B) 48 C) 12 D) 24 E) 15

15.Uchlari A(3;-2;1), B(3;0;2) va C(1;2;5) nuqtalarda bo’lgan uchburchakning BD medianasi va AC tomoni orasidagi burchakning kattaligini toping.
A) 60° B) $\arccos(\frac{\sqrt{3}}{3})$ C) 45° D) $\arccos(\frac{\sqrt{2}}{3})$ E) 30°

16.Teng yonli uchburchakning yon tomoni 25 ga teng. Asosiga tushirilgan balandligi asosidan 25 ga kam. Shu uchburchakning asosini toping.
A) $35$ B) $48$ C) $44$ D) $40$ E) $30$

17.ABC uchburchakning AK medianasi AC tomon bilan 30° li burchak tashkil qiladi. Agar $AK=\frac{13\sqrt{2}}{4}$ va ∠BCA=45° bo’lsa, BC tomonning uzunligini toping.
A) $5,5$ B) $6,5$ C) $4\sqrt{3}$ D) $\frac{11\sqrt{2}}{3}$ E) $5\sqrt{2}$

18.To’g’ri burchakli uchburchakning gipotenuzasi 25 ga, katetlaridan biri $5\sqrt{11}$ ga teng. Ikkinchi katetning gipotenuzadagi proyeksiyasini toping.
A) $18$ B) $21$ C) $14$ D) $20,4$ E) $15,5$

19.$\vec{AB}\left(4;-1;5\right), \vec{BC}\left(-2;8;1\right)$ va $\vec{AD}\left(-3;4;5\right)$ vektorlar to’rtburchakning tomonlaridan iborat. Shu to’rtburchakning diagonallaridan iborat vektorlar skalyar ko’paytmasining modulini toping.
A) $7$ B) $3$ C) $2$ D) $13$ E) $4$

20.Uchburchak tomonlarining uzunliklari $a^{2}=b^{2}+c^{2}+\sqrt{3}bc$ tenglikni qanoatlantiradi. Uzunligi $a$ ga teng tomon qarshisidagi burchakni toping.
A) $125°$ B) $120°$ C) $135°$ D) $150°$ E) $140°$

21. Ikkita to’g’ri chiziqning kesishishidan hosil bo’lgan qo’shni burchaklarning gradus o’lchovlari 5:7 nisbatda bo’lsa, shu burchaklarni toping.

A) 30°; 150° B) 75°; 105° C) 62; 118° D) 54°; 126°

22. Katetlarning nisbati 2:3 kabi bo’lgan to’g’ri burchakli uchburchakning gipotenuzasi  ga teng. Uchburchakning yuzini toping.

A) 24 B) 42 C) 36 D) 39

23. Uchburchakning birinchi tomoni *x*(*x*>13) sm, ikkinchi tomoni undan 8 sm qisqa, uchinchi tomoni esa birinchisidan 5 sm uzun. Shu uchburchakning perimetrini (sm) toping.

A) 3*x*+2 B) 3*x*3 C) 3*x*+3 D) 3*x*2

24.Agar  va  vektorlar berilgan bo'lsa,  va  vektorlar orasidagi burchakni toping.

A)  B)  C)  D) 

25. ABC uchburchakning yuzi 12 ga teng. Uning B uchidan  mediana tushirilgan. Agar  bo'lsa, AC tomonning uzunligini toping.

A)  B)  C) 10 D) 8

26. Ikki to’g’ri chiziqning kesishishidan hosil bo’lgan burchaklarning kattaliklari nisbati 7:5 ga teng. Shu burchaklardan kichigini toping.

A) 49° B) 63° C) 75° D)54°

27. Agar  va  bo'lsa,  va  vektorlar orasidagi burchakni toping.

A) 60° B) 150° C) 135° D) 120

28. Qo’shni burchaklardan biri ikkinchisidan 12° katta. Shu qo’shni burchaklarni toping.

A) 81°; 99° B) 82°; 98° C) 96°; 84° D) 80°; 100°

29. Uchburchakning birinchi tomoni *x*(*x*>12) sm, ikkinchi tomoni undan 7 sm qisqa, uchinchi tomoni esa birinchisidan 5 sm uzun. Shu uchburchakning perimetrini(sm) toping.

A) 3*x*1 B) 3*x*+2 C) 3*x*+1 D) 3*x*2

30. To’g’ri burchakli uchburchakning ketetlari 48 va 14 ga teng. Kichik katetning gipotenuzasidagi proyeksiyasini toping.

A) 10 B)  C)  D) 

31. Qo’shni burchaklardan biri ikkinchisidan 40° katta. Shu qo’shni burchaklarni toping.

A) 110° ; 70° B) 160°; 20° C) 140°; 40° D) 20°; 160°

32. Teng yonli uchburchakning yon tomoniga tushirilgan balandligi bilan ikkinchi yon tomoni orasidagi burchak 26° ga teng. teng yonli uchburchakning asosidagi burchagini toping.

A) 48° B) 50° C) 58° D) 55°

33. Qo’shni burchaklardan biri ikkinchisidan besh marta kichik bo'lsa, shu burchaklardan kattasini toping.

A) 130° B) 150° C) 144° D) 140°

34. ABC uchburchakda AB=3, CB=4 cosB= bo’lsa, AC ning qiymatini toping.

A) 6 B) 2 C) 4 D) 3

35. Qo’shni burchaklardan biri ikkinchisidan  ga katta. Shu burchaklardan kattasini toping.

A)  B)  C)  D) 

36. To’g’ri burchakli uchburchak katetlaridan biri 12 sm, gipotenuzasi esa ikkinchi katetdan 4 sm uzun. Gipatenuzaning uzunligini toping.

A) 22 B) 20 C) 18 D) 16

37. Ikki qo’shni burchakning ayirmasi ga teng. Shu burchaklardan kichigini toping.

A)  B)  C)  D) 

38. Teng yonli uchburchakning balandligi 7 ga, asosi 48 ga teng. Uning yon tomonini toping.

A) 31 B) 45 C) 55 D) 25

39. Katetlari 7 va 24 bo’lgan to’g’ri burchakli uchburchakning gipotenuzasiga tushirilgan balandligini toping.

A) 6,62 B) 6,72 C)  D) 6,82

40. To’g’ri burchakli uchburchakning bir kateti ga, bu katet qarshisidagi burchak ga teng. Ikkinchi katetni toping.

A) 4 B)  C)  D) 

41. Uchlari A(9; 2) va B(2; 4) nuqtada bo’lgan AB kesmaning o’rtasini toping.

A) (-2,5; 1,5) B) (2,5; 1,5)
C) (2,5; 3) D) (2,5; -1,5)

42. To’g’ri burchakli uchburchakining kateti ga, bu katet qarshisidagi burchak  ga teng. Shu uchburchakning gipatenuzasini toping.

A)  B) 12 C) D) 

43. Uchlari A(4; 5; 1), B(2; 3; 0) va C(2; −1; −3) nuqtada joylashgan uchburchakning BD medianasi uzunligini toping.

A)  B) 1 C) 2 D) 

44. To’gri burchakli uchburchakning otkir burchagi 600 ga teng gipotenuzasiga tushirilgan balandligi 12 ga teng uchburchakning kichik katetini toping.

A)  B)  C)  D) 

45. n ning qanday qiymatida  vektorlar perpendikulyar bo’ladi?

A) -2 B) 0; 3 C) -1 D) 2

46.  vektorlarning uzunliklari 11 va  ga teng, bu vektorlar ayirmasining uzunligi 30 ga teng. Shu vektorlar yig’indisining uzunligini toping.

A) 64 B) 34 C) 20 D) 42

47. To’gri burchakli uchburchakning o’tkir burchagi 600 ga teng gipotenuzasiga tushirilgan balandligi 21 ga teng uchburchakning katta katetini toping.

1. 42 B)  C)  D) 

48. Uchburchakning asosi ga yon tomonlari 13 va 19 ga teng. Asosiga tushirilgan medianasini toping.

A) 12 B) 18 C) 13 D) 16