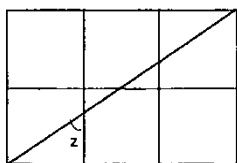## 38-Mavzu. Uchburchaklar-2

1. Uchburchakning tomonlari 10; 10 va 8 ga teng. Uchburchakning uzunligi 8 ga teng bo'lgan tomoniga tushirilgan balandligini toping.
A) 6   B) 8   C) $\sqrt{84}$ D) $\sqrt{39}$

2. Tomonlari 10; 24 va 26 bo'lgan uchburchakning katta tomoniga o'tkazilgan medianasi uzunligini toping.
A) 10   B) 12   C) 13   D) 15

3. To'g'ri burchakli uchburchakning katetlaridan biri 12 cm bo'lib, ikkinchi kateti gipotenuzadan 6 cm qisqa. Uchburchakning gipotenuzasini toping.
A) 20 cm   B) 18 cm   C) 12 cm   D) 15 cm

4. ABC to'g'ri burchakli uchburchakda AB gipotenuza. AM va BN bissektrisalar. Agar $AB = 12$ va $AM^2 + BN^2 = 169$ bo'lsa, MN ning uzunligini toping.
A) 5   B) 2,5   C) $\sqrt{28}$ D) 6

5. To'g'ri burchakli uchburchakda o'tkir burchaklarining medianalari uzunliklari 15 va $6\sqrt{5}$ ga teng. Gipotenuza uzunligini toping.
A) 18   B) 16   C) 20   D) 21

6. To'g'ri burchakli uchburchakda o'tkir burchaklarining medianalari uzunlikari $4\sqrt{13}$ va $2\sqrt{73}$ ga teng. Gipotenuza uzunligini toping.
A) 18   B) 19   C) 20   D) 21

7. To'g'ri burchakli uchburchakning kateti 7 ga, uning gipotenuzaga proyeksiyasi 1,96 ga teng. Ikkinchi katetning uzunligini toping.
A) 12   B) 16   C) 24   D) 15

8. To'g'ri burchakli uchburchakning katetlari 15 va 20 ga teng. Katta katetning gipotenuzadagi proyeksiyasini toping.
A) 12   B) 14,5   C) 16   D) 16,5

9. Katetlari nisbati 3:4 kabi bo'lgan to'g'ri burchakli uchburchakning gipotenuzasiga tushirilgan balandligi uni biri ikkinchisidan 14 ga katta bo'lgan ikkita kesmaga ajratadi. Gipotenuza uzunligini toping.
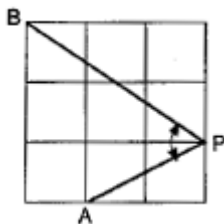A) 25   B) 20   C) 50   D) 100

10. Uchburchak tomonlari 3; 4 va 5 ga teng. Uchburchakning eng kichik balandligi topilsin.

A) 4   B) 3   C) 2,4   D) 1,8

11. O'tkir burchagi 30° bo'lgan to'g'ri burchakli uchburchakning katta kateti 12 ga teng. Kichik katetning gipotenuzadagi proyeksiyasini toping.

A) $4\sqrt{3}$ B) $6\sqrt{3}$ C) $2\sqrt{3}$ D) 4

12. To'g'ri burchakli uchburchakning gipotenuzasi 5 ga, bu kateti gipotenuzadagi proyeksiyasi 2,4 ga teng. Ikkinchi katetning kvadratini toping.

A) 14   B) 10   C) 12   D) 13

13. ABC to'g'ri burchakli uchburchakda $AC = 5$ va uning AB gipotenuzadagi proyeksiyasi 4 ga teng bo'lsa, $BC =$?

A) 3   B) 9   C) $6\frac{2}{3}$ D) 3,75

14. Rasmdagi to'g'ri to'rtburchak bir xil kvadratlardan tashkil topgan, cosz=?
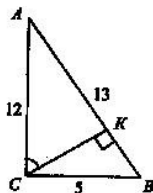

A) $\frac{2}{\sqrt{13}}$ B) $\frac{5}{\sqrt{13}}$ C) $\frac{3}{\sqrt{13}}$ D) $\frac{4}{\sqrt{13}}$

15. Rasmda kvadrat 9 ta teng kvadratchalardan tashkil topgan bo'lib, $\angle BPA = \alpha$, $tg\alpha$ ni toping.

A) $\frac{4}{9}$ B) $\frac{3}{4}$ C) $\frac{7}{4}$ D) $\frac{8}{5}$

16. ABC- uchburchakda. BC=5 AC=12 va AB=13. cos$\angle$ACK nimaga teng?

A) $\frac{5}{13}$ B) $\frac{5}{12}$ C) $\frac{13}{12}$ D) $\frac{12}{13}$

17. To'g'ri burchakli uchburchakning katetlaridan biri 4 ga teng, ikkinchisi gipotenuzadan $\sqrt{41} - 5$ ga kam. Shu uchburchakning yuzini toping.
A) 15   B) 20   C) 12   D) 10

18. To'g'ri burchakli uchburchakning to'g'ri burchagi uchidan tushirilgan balandlik va mediananing nisbati 4:5 kabi. Shu uchburchak kichik katetining katta katetiga nisbatini toping.
A) $\frac{1}{3}$ B) $\frac{1}{2}$ C) $\frac{3}{5}$ D) $\frac{2}{5}$

19. ABC uchburchakda $AB = 4$, $cosB = \frac{1}{3}$ va $sinC = \frac{2}{3}$ bo'lsa, AC tomonning uzunligini toping.
A) $3\sqrt{2}$ B) $4\sqrt{2}$ C) $2\sqrt{3}$ D) $3\sqrt{3}$

20. ABC uchburchakda ∠A=60°, ∠B=75°, AB=8 cm bo'lsa, BC nimaga teng?
A) $4\sqrt{2}$ cm   B) $4\sqrt{6}$ cm   C) $\frac{8\sqrt{6}}{3}$ cm   D) $8\sqrt{2}$ cm

21. Uchburchakning tomonlari 4; 5 va 6 ga teng 5 ga teng bo'lgan tomon qarshisidagi burchakning kosinusini toping.
A) $\frac{9}{16}$ B) $\frac{7}{16}$ C) $\frac{1}{8}$ D) $\frac{7}{8}$

22. Uchburchakning a, b va c tomonlari orasida $a^2 = b^2 + c^2 - \sqrt{3}bc$ bog'lanish mavjud. Uzunligi a ga teng bo'lgan tomon qarshisidagi burchakni toping.
A) 60°   B) 30°   C) 150°   D) 45°

23. Uchburchakning tomonlari uzunliklari m, n va k bo'lib, ular $m^2=n^2+k^2+\sqrt{2}nk$ tenglikni qanoatlantiradi. Uzunligi m ga teng tomon qarshisidagi burchakni toping.
A) 45°   B) 150°   C) 90°   D) 135°

24. Tomonlari 8;8;10 bo'lgan uchburchakni turini aniqlang.
A) Teng yonli to'g'ri burchakli   B) Teng yonli o'tmas burchakli
C) Teng yonli o'tkir burchakli   D) Muntazam uchburchak

25. Uzunliklar 3,4,5,6 va 7 bo'lgan kesmalardan nechta teng yonli bo'lmagan o'tmas burchakli uchburchaklar yasash mumkin?
A) birorta ham uchburchak yasash mumkin emas   B) 2   C) 3   D) 5

26. Uchburchakning burchaklari 1:2:3 nisbatda bo'lib, uning kichik tomoni 5 ga teng. Uchburchakning yuzini toping.

A) $25\sqrt{3}$ B) $12{,}5\sqrt{3}$ C) 24   D) 20

27. Uchburchak tomonlari 7,8,9 ga teng bo'lsa, uning eng kichik tomonining eng katta tomonidagi proeksiyasi qanchaga teng?

A) $3\frac{1}{2}$ B) 3   C) $3\frac{2}{3}$ D) $3\frac{1}{3}$

28. ABC uchburchakda $\angle A = 30^0$ va $b = 10$ bo'lsin. Agar $c^2 = 100 + a^2 - 10a$ bo'lsa, $a =$?

A) 5   B) 8   C) 10   D) $\frac{10\sqrt{3}}{3}$

29. Tomonlari 17; 21 va 10 bo'lgan uchburchakning kichik burchagi tangensini toping.

A) $\frac{8}{15}$ B) $\frac{15}{8}$ C) $\frac{3}{4}$ D) $\frac{4}{3}$

30. O'tkir burchakli uchburchak tomonlarining uzunliklari natural sonlardan iborat va ular ayirmasi 4 ga teng bo'lgan arifmetik progressiyani tashkil qiladi. Shu uchburchak kichik tomonining eng kichik qiymati nechaga teng bo'lishi mumkin?

A) 12   B) 15   C) 13   D) 14

Kalitlar

1.	C	16.	A
2.	C	17.	D
3.	D	18.	B
4.	A	19.	B
5.	A	20.	B
6.	C	21.	A
7.	C	22.	B
8.	C	23.	D
9.	C	24.	C
10.	C	25.	D
11.	C	26.	B
12.	D	27.	C
13.	D	28.	A
14.	A	29.	A
15.	C	30.	C