## 45-Mavzu. Aylana va doira-2

**1.** Aylanadan tashqaridagi nuqtadan ikkita kesuvchi o‘tkazildi. Birinchi kesuvchining aylana ichidagi qismi 96 ga, tashqi qismi 36 ga teng. Agar ikkinchi kesuvchining ichki qismi tashqi qismidan 3 ga katta bo‘lsa, ikkinchi kesuvchining tashqi qismini toping.

A) 48 B) 64 C) 42 D) 51

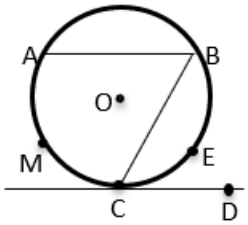
**2.** Aylanadagi $AB$ va $CD$ vatarlar $O$ nuqtada kesishadi. Agar $AO$=5, $BO$=8, $OC$=10 bo`lsa, $OD$ ni toping.

A) 6 B) 5 C) 4 D) 2

**3.** Aylana markazidan turli tomonlarda uzunliklari 126 va 50 bo`lgan parallel vatarlar o`tkazilgan. Ular orasidagi masofa 76 bo`lsa, aylana radiusini toping.

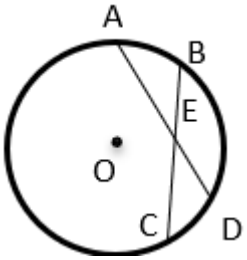
A) 55 B) 60 C) 65 D) 72

**4.** Agar $\overset{\frown}{AMC} = 140°$, AB||CD va CD urinma bo‘lsa, $\overset{\frown}{BEC} =$?



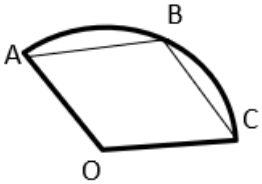

A) $140°$ B) $70°$ C) $120°$ D) $210°$

**5.** $\overset{\frown}{AB} = 70°$ , $\overset{\frown}{CD} = 80°$, $\angle CED =$?




A) $70°$ B) $75°$ C) $80°$ D) $50°$

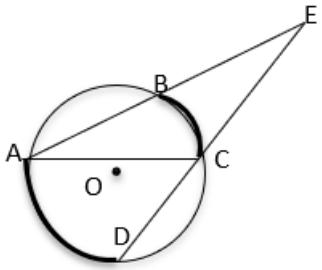
**6.** Rasmda A, B va C nuqtalar O markazli aylanaga tegishli. Agar $\angle ABC = 100°$ bo‘lsa, $\angle AOC =$?




A) $130°$ B) $140°$ C) $150°$ D) $160°$

**7.**Burchakning uchi aylana tashqarisida bo‘lib, uning tomonlari aylanadan 32° va 98° li yoylar ajratadi. Shu burchakning kattaligini toping.
A) 33° B) 38° C) 65° D) 70°

**8.** $\overset{\frown}{AD} = 177°$ va $\overset{\frown}{BC} = 79°$ bo‘lsa, $\angle AED$ =?

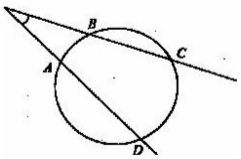



A) 47° B) 48° C) 49° D) 50°

**9.** Yarim aylananing biror nuqtasidan diametriga tushirilgan perpendikulyar kesma uni ikki qismga ajratadi. Agar perpendikulyar uzunligi 15 ga, qismlardan kichigi 9 ga teng bo‘lsa, yarim aylana radiusi qanday?
A) 14 B) 15 C) 16 D) 17

**10.** Aylanada A,B,C,D,E nuqtalar shunday qo‘yilganki, ular hosil qilgan yoylarning nisbati $AB:BC:CD:DE:EA = 1:2:3:4:5$. BE va AC kesmalarning kesishish nuqtasi – O bo‘lsin. AOB burchakning qiymatini toping.
A) 112° B) 96° C) 72° D) 144°

**11.** A, B, C va D nuqtalar aylanani shunday yoylarga bo‘ladiki AB, BC, CD va AD yoylarning gradus o‘lchovlari nisbati 1:2:3:4 kabi. AD va BC kesuvchilar orasidagi burchak topilsin.

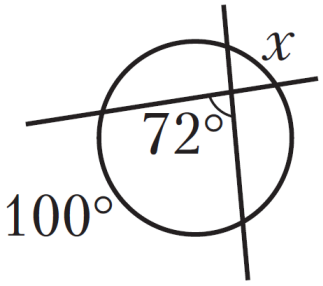



A) 18° B) 72° C) 36° D) 45°

**12.** Aylana vatari 10 cm ga teng Vatarning bir uchidan aylanaga urinma o‘tkazilgan, ikkinchi uchidan urinmaga parallel kesuvchi o‘tkazilgan. Kesuvchining ichki kesmasi 12 cm ga teng. Aylana radiusini toping.
A) 6 B) 6,25 C) 5,25 D) 8

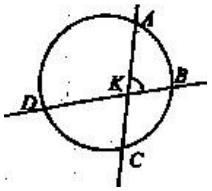
**13.** Doiraning vatari uni qanday shakllarga ajratadi?
A) 2 ta segment B) 2 ta sektor C) 2 ta yarim doira D) ikkita yoyga

**14.** Rasmda orasidagi burchak 72° bo‘lgan va aylanani kesib o‘tuvchi ikki to‘g‘ri chiziq tasvirlangan bo‘lib, ular aylana ichida kesishadi. Bu to‘g‘ri chiziqlarning aylanadan ajratgan yoylaridan birining kattaligi 100° bo‘lsa, $x$ yoyning kattaligini toping.




A) 28° B) 36° C) 44° D) 108°

**15.** A , B , C va D nuqtalar aylanani shunday yoylarga bo‘ladiki AB, BC, CD va AD yoylarning gradus o‘lchovlari nisbati 1:3:2:4 kabi. AC va BD vatarlar orasidagi AKB burchak topilsin.




A) 18° B) 27° C) 36° D) 54°

**16.** Har birining diametri 50 ga teng bo‘lgan uchta quvur suv o‘tkazish qobiliyati shu uchta quvurnikiga teng bo‘lgan bitta quvur bilan almashtirildi. Yangi quvurning diametrini toping.

A) 85 B) 150 C) $50\sqrt{3}$ D) 75

**17.** Radiusi 18 ga va markaziy burchagi $60^{\circ}$ ga teng doiraviy sektorning yoyi aylana shakliga keltirilgan.Shu aylana radiusini toping.

A) $r=3$ B) $r=6$ C) $r=1,5$ D) $r=2$

**18.** Markazi O nuqtada bo‘lgan aylana AB yoyining uzunligi 6 ga teng. Agar aylananing radiusi 4 ga teng bo‘lsa, OAB sektorning yuzini toping.

A) 12 B) 8 C) 10 D) 14

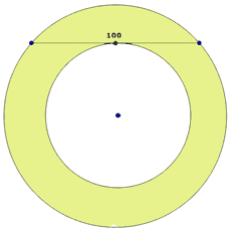
**19.** Radiusi $\sqrt{13}$ ga, yoyining radian o‘lchovi 2 ga teng bo‘lgan sektorning yuzini hisoblang.

A) 13 B) 26 C) 39 D) 52

**20.** Radiusi 6 ga teng bo‘lgan doira va markaziy burchagi 90° bo‘lgan doiraviy sektorlar tengdosh. Sektorning perimetrini toping.

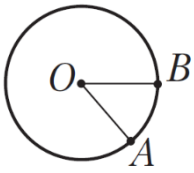
A) $2\pi + 10$ B) $6(\pi + 4)$ C) $3(\pi + 8)$ D) $4\pi + 15$

**21.** Rasmda ikkita konsentrik aylana berilgan bo‘lib, katta aylananing uzunligi 100 ga teng bo‘lgan vatari kichkina aylanaga urinishi ma‘lum. Shu ikki aylana orasidagi halqaning yuzasini toping.




A) $2500\pi$ B) $5000\pi$ C) $7500\pi$ D) $10000\pi$

**22.** Rasmda markazi O nuqtada va radiusi 3 cm ga teng bo‘lgan aylana tasvirlangan, $\angle AOB = 60°$. AOB sektorning yuzasini toping ($cm^2$).




A) $\pi$ B) $1{,}5\pi$ C) $2\pi$ D) $2{,}5\pi$

**23.** ABCD to‘rtburchak uchlarini markaz qilib, bir xil radiusli o‘zaro kesishmaydigan sektorlar yasalgan. Agar radius 2 ga teng bo‘lsa, sektorlar yuzlari yig‘indisini toping.

A) $\pi$ B) $2\pi$ C) $4\pi$ D) $16\pi$

**24.** Uzunligi $m$ ga teng bo‘lgan vatar 90° li yoyga tiraladi. Hosil bo‘lgan segmentning yuzini toping.

A) $\frac{\pi m^2}{8}$ B) $\frac{m^2}{8}(\pi - 2)$ C) $\frac{m^2(\pi-\sqrt{3})}{4}$ D) $\frac{\pi m^2}{4}$

**25.** Aylana radiusi $a$ ga teng. Uning $30^\circ$ li yoyiga mos keluvchi segment yuzini toping.

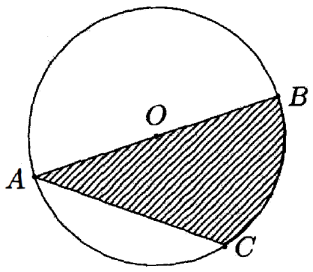
A) $\frac{a^2(\pi-2)}{12}$ B) $\frac{a^2(\pi-3)}{12}$ C) $\frac{a^2(\pi-2)}{6}$ D) $\frac{a^2(\pi-3)}{6}$

**26.** To‘g‘ri chiziq doiraning aylanasini uzunliklarining nisbati 1: 3 kabi bo‘lgan ikki yoyga ajratadi. Bu to‘g‘ri chiziq doiraning yuzini qanday nisbatda bo‘ladi?

A) $\frac{\pi+1}{2\pi+1}$ B) 1:9 C) $\frac{\pi-2}{3\pi+2}$ D) 4:9

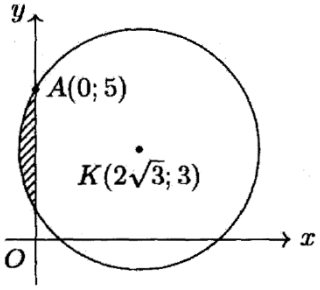
**27.** Turli radiusli uchta aylana o‘zaro tashqi urinadi. Agar ularning markazlari orasidagi masofa 5,6,7 bo‘lsa, katta aylana radiusini toping.
A) 2 B) 3 C) 4 D) 5

**28.** Rasmda tasvirlangan markazi O nuqtada bo‘lgan doiraning yuzasi 24 ga teng. Agar $\angle BAC = 45°$ bo‘lsa, doiraning bo‘yalgan (shtrixlangan) qismining yuzasini toping.




A) $\frac{6(\pi+1)}{\pi}$ B) $\frac{6(\pi+2)}{\pi}$ C) $\frac{12(\pi+2)}{\pi}$ D) $\frac{6(\pi-2)}{\pi}$

**29.** Rasmda markazi K nuqtada bo‘lgan doira tasvirlangan. U ning bo‘yalgan (shtrixlangan) qismi yuzasini toping.




A) $\frac{2(\pi-3)}{3}$ B) $\frac{4(\pi-3)}{3}$ C) $2\left(2\pi-3\sqrt{3}\right)$ D) $\frac{4\left(2\pi-3\sqrt{3}\right)}{3}$

**30.** Doiraning 120° li yoyiga mos keluvchi segmentining balandligi 2,5 ga teng. Ushbu segmentga tomonlarining nisbati AB:BC=1:4 kabi bo‘lgan ABCD to‘g‘ri to‘rtburchak shunday ichki chizilganki, BC tomon segment vatarida yotib, A va D nuqtalar segmentning yoyida yotadi. To‘g‘ri to‘rtburchak yuzini toping.
A) 9 B) 15 C) 12 D) 13,5

# Kalitlar

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