**1-topshiriq.** **Mavzuga oid blis so’rov:**

1. Teodolitni kim kashf qilgan?

2. Teodolitning qanday to’rlari bor?

3. Plan tuzishda boshqa topografik asboblardan teodolitning afzalligi?

4. Teodolit yordamida bir vaqtning o’zida vertikal va gorizontalburchaklar hamda balandlikni aniqlash mumkinmi?

5. Teodolit yo’llari nima?

6. Orentirlash nima

7. Orinterlash burchagi deb nimaga aytiladi.?

8. Azimut nima.?

9. Azimut burchagi deb nimaga aytiladi.?

10. Magnit azimuti nima.?

11. Magnit og'ish burchagi deb nimaga aytiladi.?

12. Rumb burchagi nima .?

13. Rumbni nechta choragi bo'ladi va ularni graduslari qancha.?

14. To'g'ri azimut ning teskari tomonlari qanday topiladi.? 15. Azimut rumbning eng kichik va eng katta qiymatlari necha gradus bo'ladi.?

**2-topshiriq. Misollarni ishlang.**

1. 70' ,45' ,330' ,215' ,190' teskari tomonlarini toping?

2. Magnit azimuti 67' 50 minut ga teng azimut burchagi esa 64' 50 minutga teng b'lsa magnit og'ish burchagini toping?

3. Rumb 3 chorak r-20' bo'lsa berilgan nuqtalarning azimutini tiping?

4. Azimut burchagi 295' ga teng bo'lsa berilgan nuqtaning rumb burchagini toping?

5. O'zingiz rumgning 4 ta choragidan bitadan misol keltirib , ularning rumb va azimut burchaklarini yozing?

**3-topshiriq. Qudagi burchaklarning teskari azimutini toping**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| № | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| To’gri azimut | 2330 | 1800 | 1930 | 740' | 200' | 3400 | 2850 | 2500 | 1150 | 2200 |
| Teskari azimut |  |  |  |  |  |  |  |  |  |  |

**4-topshiriq.** Quydagi nuqtalarning azimutiga ko’ra rumbini aniqlang.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| № | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Azimut | 1330 | 1840 | 2930 | 1740' | 00' | 1400 | 850 | 1500 | 2150 | 2000 |
| Rumb |  |  |  |  |  |  |  |  |  |  |

**5-topshiriq.** Quydagi nuqtalarning rumbiga ko’ra azimutini aniqlang.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| № | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Rumb | 300 Sh.Shq | 270 j.Shq | 820 Sh.g’ | 570 j..Shq | 250 Sh.Shq | 200 Sh.Shq | 620 Sh.g’ | 470 j..Shq | 530j .Shq | 500 Sh.g’ |
| Azimut |  |  |  |  |  |  |  |  |  |  |

**6-topshiriq.** Chiziqning azimuti va uzunligiga qarab quydagi marshrutlarning sxematik planini tuzish (1:5000)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Marshrut tomonlari** | **I variant** | | **Marshrut tomonlari** | **II variant** | |
| **Azimut** | **Uzunligi, m** | **Azimut** | **Uzunligi, m** |
| 1 - 2 | 380 | 237 | 1 - 2 | 00 | 175 |
| 2 - 3 | 670 | 180 | 2 - 3 | 370 | 210 |
| 3 - 4 | 1750 | 320 | 3 - 4 | 1620 | 340 |
| 4 - 5 | 3200 | 430 | 4 - 5 | 2950 | 410 |
| 5 - 6 | 1770 | 355 | 5 - 6 | 1650 | 280 |
| 6 - 7 | 550 | 277 | 6 - 7 | 350 | 265 |

**7-topshiriq.** Berilgan yo’nalishlarning rumbiga qarab shu yo’nalishlarning sxematik planini tuzish (1:5000)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Marshrut tomonlari** | **I variant** | | **Marshrut tomonlari** | **II variant** | |
| **Rumb** | **Uzunligi, m** | **Rumb** | **Uzunligi, m** |
| 1 - 2 | 380 sh.g’ | 250 | 1 - 2 | 480 sh.shq | 350 |
| 2 - 3 | 100 sh.shq | 280 | 2 - 3 | 200 j.shq | 380 |
| 3 - 4 | 590 j.shq | 420 | 3 - 4 | 650 j.g’ | 310 |
| 4 - 5 | 750 j.g’ | 330 | 4 - 5 | 850 sh.g’ | 230 |
| 5 - 6 | 30 sh.g’ | 255 | 5 - 6 | 70 j.shq | 185 |
| 6 - 7 | 480 sh.shq | 230 | 6 - 7 | 380 sh.shq | 440 |

**8-topshiriq.** Chiziqning azimuti va uzunligiga qarab quydagi marshrutlarning sxematik planini tuzish (1:5000)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Marshrut tomonlari** | **I variant** | | **Marshrut tomonlari** | **II variant** | |
| **Azimut** | **Uzunligi, m** | **Azimut** | **Uzunligi, m** |
| 1 - 2 | 380 | 237 | 1 - 2 | 00 | 175 |
| 2 - 3 | 670 | 180 | 2 - 3 | 370 | 210 |
| 3 - 4 | 1750 | 320 | 3 - 4 | 1620 | 340 |
| 4 - 5 | 3200 | 430 | 4 - 5 | 2950 | 410 |
| 5 - 6 | 1770 | 355 | 5 - 6 | 1650 | 280 |
| 6 - 7 | 550 | 277 | 6 - 7 | 350 | 265 |

**9-topshiriq.** Berilgan yo’nalishlarning rumbiga qarab shu yo’nalishlarning sxematik planini tuzish (1:5000)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Marshrut tomonlari** | **I variant** | | **Marshrut tomonlari** | **II variant** | |
| **Rumb** | **Uzunligi, m** | **Rumb** | **Uzunligi, m** |
| 1 - 2 | 380 sh.g’ | 250 | 1 - 2 | 480 sh.shq | 350 |
| 2 - 3 | 100 sh.shq | 280 | 2 - 3 | 200 j.shq | 380 |
| 3 - 4 | 590 j.shq | 420 | 3 - 4 | 650 j.g’ | 310 |
| 4 - 5 | 750 j.g’ | 330 | 4 - 5 | 850 sh.g’ | 230 |
| 5 - 6 | 30 sh.g’ | 255 | 5 - 6 | 70 j.shq | 185 |
| 6 - 7 | 480 sh.shq | 230 | 6 - 7 | 380 sh.shq | 440 |