

八年级九月月考答案

1.-10. DBCBD CACBC

11. 540°

12. $\underline{6}$

13. $\underline{10.5}$

14. 70° 或 110°

15. $\underline{0.5}$

16. $\underline{0 \leq S \leq 32}$

17. 解。依题意得：有 2 种情况：

①6cm, 6cm, 12cm $\because 6+6=12 \therefore$ 舍 -----不写舍的情况扣 2 分

②9cm, 9cm, 6cm \checkmark -----不写单位扣 1 分

-----8 分

18.证明：在 ABE 和 ACD 中

$$\begin{cases} AB = AC \\ \angle A = \angle A \\ AE = AD \end{cases}$$

$\therefore \triangle ABE \cong \triangle ACD$ (SAS)

$\therefore \angle B = \angle C$ -----8 分

19 (1) $\underline{180^\circ}$

(2) 证明： $\because \angle A + \angle C + \angle CBA + \angle CDA = 360^\circ$, $\angle A = \angle C = 90^\circ$

$\therefore \angle CBA + \angle CDA = 180^\circ$

$\because BE$ 平分 $\angle ABC$, DF 平分 $\angle ADC$

$\therefore \angle EBA = \angle EBC$, $\angle FDA = \angle FDC$

$\therefore \angle CBE + \angle FDC = 90^\circ$

又 $\angle DFC + \angle FDC = 90^\circ$

$\therefore \angle CBE = \angle DFC$

$\therefore BG \parallel FD$

$\therefore \angle G = \angle CDF$.

20. (1) 图略 -----2 分

(2) (2, 3) (6, 0) (1, 0) -----5 分

(3) (-2, -3) 或 (-5, -3) 或 (-5, 3) -----8 分

21.证明： $\because \angle BAC = \angle DAE = 60^\circ$

$\therefore \angle CAE = \angle BAD$

在 ACE 和 ABD 中

$$\begin{cases} CA = BA \\ \angle CAE = \angle BAD \\ EA = DA \end{cases}$$

$\therefore \triangle ACE \cong \triangle ABD$ (SAS) -----5 分

(2) $\underline{60^\circ}$ -----8 分

22. (1) ABD BA -----2 分

(2) 证明：由题意可知

$$\because \angle CAD = \angle CBD, \angle COA = \angle DOB$$

$$\therefore \angle C = \angle D$$

\because C 在 A 正北方向, D 在 B 正北方向, B 在正东方向

$$\therefore \angle CAB = \angle DBA = 90^\circ$$

在 $\triangle CAB$ 和 $\triangle DBA$ 中

$$\begin{cases} \angle C = \angle D \\ \angle CAB = \angle DBA \\ AB = BA \end{cases}$$

$$\therefore \triangle CAB \cong \triangle DBA \text{ (AAS)} \quad \therefore CA = DB$$

即海岛 C, D 到观测点 A, B 所在海岸距离 CA, DB 相等。-----6 分

(3) 延长 AG 至 I, 使得 $IG = AG$, 连接 IB

$$\because BK \text{ 中点为 } G, \therefore KG = GB$$

在 $\triangle KGA$ 和 $\triangle BGI$ 中

$$\begin{cases} KG = GB \\ \angle KGA = \angle BGI \\ AG = IG \end{cases}$$

$$\therefore \triangle KGA \cong \triangle BGI \text{ (SAS)}$$

$$\therefore KA = IB, \angle K = \angle IBK, \text{ 则 } KA \parallel IB$$

$$\therefore \angle IBA = 180^\circ - \angle KAB = 90^\circ = \angle CAB$$

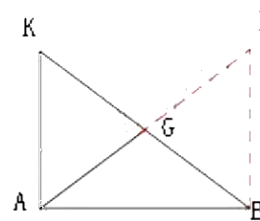
在 $\triangle KAB$ 和 $\triangle IBA$ 中

$$\begin{cases} KA = IB \\ \angle KAB = \angle IBA \\ AB = BA \end{cases}$$

$$\therefore \triangle KAB \cong \triangle IBA \text{ (SAS)}$$

$$\therefore KB = AI = 2AG = 368$$

$$\therefore AG = 184 \text{ 海里} \text{-----10 分}$$



23.(1)① ACB-----2 分

②解:

延长 AB, DN 交于 I 点

$$\because N \text{ 为 } BC \text{ 中点}, \therefore BN = CN$$

$$\because \angle BAM + \angle MDC = 180^\circ$$

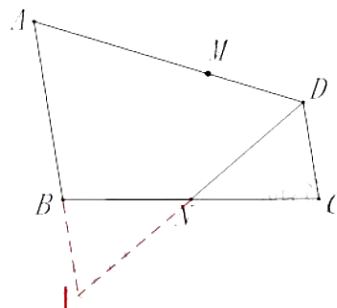
$$\therefore AI \parallel DC$$

$$\therefore \angle BIN = \angle CDN, \angle IBN = \angle DCN$$

在 $\triangle BIN$ 和 $\triangle CDN$ 中

$$\begin{cases} \angle BIN = \angle CDN \\ \angle IBN = \angle DCN \\ BN = CN \end{cases}$$

$$\therefore \triangle BIN \cong \triangle CDN \text{ (AAS)}$$



$$\therefore DC=BI, \because DC=DM \therefore MD=BI$$

$$\because AB=AM$$

$$\therefore AI=AD$$

$$\therefore \angle NDC = \angle I = \angle ADI = (180^\circ - 70^\circ) / 2 = 55^\circ \text{ -----7 分}$$

(2) 延长 DN 至 I 使 NI=DN, 连结 AI, AD.

在 DNC 和 INB 中

$$\begin{cases} DN = IN \\ \angle 1 = \angle 2 \\ CN = BN \end{cases}$$

$$\therefore \triangle DNC \cong \triangle INB \text{ (SAS)}$$

$$\therefore DC=IB=MD, \angle C = \angle 3, IN=DN$$

$$\because \angle BAM + \angle MDC = 180^\circ$$

五边形内角和 540°

$$\therefore \angle 5 + \angle C + \angle M = 360^\circ$$

$$\therefore \angle 5 + \angle 3 + \angle M = 360^\circ$$

$$\text{又 } \angle 5 + \angle 3 + \angle 4 = 360^\circ$$

$$\therefore \angle M = \angle 5$$

在 AMD 和 ABI 中

$$\begin{cases} AM = AB \\ \angle M = \angle 5 \\ MD = BI \end{cases}$$

$$\therefore \triangle AMD \cong \triangle ABI \text{ (SAS)}$$

$$\therefore AI=AD$$

在 ANI 和 AND 中

$$\begin{cases} AN = AN \\ AI = AD \\ NI = ND \end{cases}$$

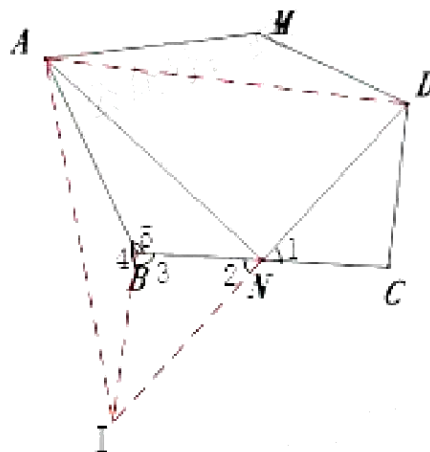
$$\therefore \triangle ANI \cong \triangle AND \text{ (SSS)}$$

$$\therefore \angle ANI = \angle AND$$

$$\text{又 } \angle ANI + \angle AND = 180^\circ$$

$$\therefore \angle AND = 90^\circ$$

$$\therefore \angle ANB + \angle DNC = 90^\circ \text{ -----10 分}$$



24. 解： $\because a-2 \geq 0$ 且 $2-a \geq 0$

$$\therefore a=2, b=-4$$

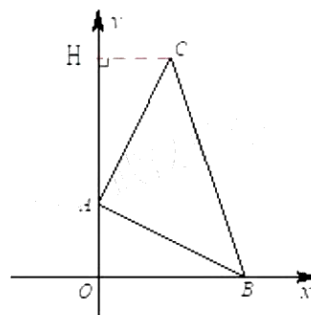
$$\therefore OA=2, OB=4 \text{ -----2 分}$$

过 C 作 $CH \perp$ 有、轴于 H

$$\because \angle CAH + \angle HCA = \angle CAH + \angle OAB = 90^\circ$$

$$\therefore \angle HCA = \angle OAB$$

在 HCA 和 OAB 中



$$\begin{cases} \angle CHA = \angle AOB \\ \angle HCA = \angle OBA \\ AC = AB \end{cases}$$

$\therefore \triangle HCA \cong \triangle OBA$ (AAS)

$\therefore HC = OA = 2, AH = OB = 4$

$HO = 4 + 2 = 6$

$\therefore C$ 为 $(2, 6)$ -----4 分

(2) ①过 C 作 $CK \parallel AE$ 交 y 轴于 K 。

则 $\angle KCA + \angle EAC = 180^\circ$

由 $\angle EAD + \angle EAC + \angle CAB + \angle DAB = 360^\circ$ 得 $\angle EAC + \angle DAB = 180^\circ$

$\therefore \angle KCA = \angle DAB$

$\because \angle KAC + \angle BAO = \angle DBA + \angle BAO = 90^\circ$

$\therefore \angle KAC = \angle DBA$

在 $\triangle KAC$ 和 $\triangle DBA$ 中

$$\begin{cases} \angle KAC = \angle DBA \\ AC = BA \\ \angle KCA = \angle DAB \end{cases}$$

$\therefore \triangle KAC \cong \triangle DBA$ (ASA)

$\therefore AD = CK = EA$

由 $CK \parallel AE$ 得 $\angle 1 = \angle 2, \angle 3 = \angle 4$

在 $\triangle KMC$ 和 $\triangle AME$ 中

$$\begin{cases} \angle 2 = \angle 1 \\ CK = EA \\ \angle 4 = \angle 3 \end{cases}$$

$\therefore \triangle KMC \cong \triangle AME$ (ASA)

$\therefore ME = MC$ -----7 分

②过 E 作 $EH \perp AC$ 。过 D 作 $DI \perp BA$ 于 I

则 $\angle EHA = \angle DIA = 90^\circ$

$\because \angle IAD + \angle IAE = \angle IAE + \angle HAE = 90^\circ$

$\therefore \angle IAD = \angle HAE$

在 $\triangle EHA$ 和 $\triangle DIA$ 中

$$\begin{cases} \angle EHA = \angle DIA \\ \angle IAD = \angle HAE \\ DA = EA \end{cases}$$

$\therefore \triangle EHA \cong \triangle DIA$ (AAS)

$\therefore DI = EH \quad \because AB = AC$

$\therefore S_{\triangle AEC} = S_{\triangle ADB} = AO \cdot DB / 2 = 2 \times (4 + 2.1) \div 2 = 6.1$ -----9 分

(2) $(-11.05, 2)$ 或 $(-7.05, 9.05)$ 或 $(-5.525, 3.525)$ ----

