

一、选择题

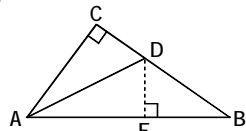
1~3.CDA 4~6.AAB

二、填空题

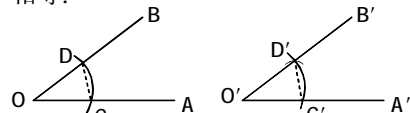
7.4 8.50°

9.BF=EC 或 BC=EF 或 AB//DE 或 $\angle A=\angle D$ 或 $\angle B=\angle E$ 10.2 11.2
12.(0,-6)或(0,-3)或(0,3)

三、证明

13.证明: $\therefore AD \parallel BC$, $\therefore \angle DAC = \angle BCA$. $\therefore DF \parallel BE$, $\therefore \angle DFA = \angle BEC$.在 $\triangle AFD$ 和 $\triangle CEB$ 中, $\begin{cases} \angle DFA = \angle BEC, \\ AF = CE, \end{cases}$ $\therefore \angle DFA = \angle BEC$, $\therefore \triangle AFD \cong \triangle CEB(ASA)$. $\therefore AD = CB$.14.解: $\therefore \angle CMD = 90^\circ$, $\therefore \angle CMA + \angle DMB = 90^\circ$. $\therefore \angle CAM = \angle DBM = 90^\circ$, $\therefore \angle CMA + \angle ACM = 90^\circ$. $\therefore \angle ACM = \angle DMB$.在 $\triangle ACM$ 和 $\triangle BMD$ 中, $\begin{cases} \angle A = \angle B, \\ \angle ACM = \angle BMD, \end{cases}$ $\therefore CM = MD$, $\therefore \triangle ACM \cong \triangle BMD(AAS)$. $\therefore AC = BM = 3$ 米. $\therefore AM = AB - BM = 12 - 3 = 9$ (米). $\therefore 9 \div 2 = 4.5$ (秒). \therefore 这个人还需要4.5秒才能到达A处.15.解:如图,过点D作 $DE \perp AB$ 于点E.

(第15题图)

 $\therefore AD$ 平分 $\angle BAC$, $DE \perp AB$, $DC \perp AC$, $\therefore DC = DE$.又 $\therefore BD:DC = 2:1$, $BC = 12$ cm, $\therefore DC = 12 \times \frac{1}{3} = 4$ (cm), $\therefore DE = DC = 4$ cm. $\therefore S_{\triangle ABD} = \frac{1}{2} \times 16 \times 4 = 32$ (cm²).16.解:(1)证明: $\therefore CF \parallel AB$, $\therefore \angle ADE = \angle F$, $\angle A = \angle ECF$.在 $\triangle ADE$ 和 $\triangle CFE$ 中, $\begin{cases} \angle A = \angle ECF, \\ \angle ADE = \angle F, \end{cases}$ $\therefore DE = FE$, $\therefore \triangle ADE \cong \triangle CFE(AAS)$.(2) $\therefore \triangle ADE \cong \triangle CFE$, $\therefore AD = CF = 4$. $\therefore BD = AB - AD = 5 - 4 = 1$.17.解:(1)如图, $\angle A'O'B'$ 即为所求.(2) DC ,SSS,全等三角形的对应角相等.

(第17题图)

四、

18.解:(1)证明:在 $\triangle BPF$ 和 $\triangle CEP$ 中, $\begin{cases} BP = CE, \\ \angle B = \angle C, \end{cases}$ $\therefore BF = CP$, $\therefore \triangle BPF \cong \triangle CEP(SAS)$. $\therefore PE = PF$.(2)在 $\triangle ABC$ 中, $\therefore \angle A = 44^\circ$, $\angle B = \angle C$, $\therefore \angle B = \angle C = \frac{180^\circ - 44^\circ}{2} = 68^\circ$. $\therefore \triangle BPF \cong \triangle CEP$, $\therefore \angle BFP = \angle CPE$. $\therefore \angle FPC = \angle B + \angle BFP = \angle FPE + \angle CPE$, $\therefore \angle FPE = \angle B = 68^\circ$.19.解:(1)证明: \therefore 射线AD平分 $\angle BAC$, $\therefore \angle CAE = \angle FAE$.在 $\triangle AEC$ 和 $\triangle AEF$ 中, $\begin{cases} AC = AF, \\ \angle CAE = \angle FAE, \end{cases}$ $\therefore AE = AE$, $\therefore \triangle AEC \cong \triangle AEF(SAS)$.(2) $\therefore \triangle AEC \cong \triangle AEF$, $\therefore \angle AEC = \angle AEF$. $\therefore \angle AEB = 50^\circ$, $\therefore \angle AEC = 130^\circ$. $\therefore \angle AEF = 130^\circ$. $\therefore \angle BEF = \angle AEF - \angle AEB = 130^\circ - 50^\circ = 80^\circ$.

20.解:(1)2.

(2)证明:在 $Rt\triangle BCD$ 和 $Rt\triangle BED$

中,

 $\begin{cases} BD = BD, \\ DC = DE, \end{cases}$ $\therefore Rt\triangle BCD \cong Rt\triangle BED(HL)$. $\therefore BC = BE$.(3) $\therefore \triangle AED$ 的周长是4cm, $\therefore AE + DE + AD = 4$ cm. $\therefore DE = DC$, $\therefore AE + DC + AD = 4$ cm,即 $AC + AE = 4$ cm. $\therefore AC = 3$ cm, $\therefore AE = 1$ cm. $\therefore BE = BC = 4$ cm, $\therefore AB = BE + AE = 4 + 1 = 5$ cm.

五、

21.解:(1)可行.理由如下:

在 $\triangle ABC$ 和 $\triangle DEC$ 中, $\begin{cases} AC = DC, \\ \angle ACB = \angle DCE, \end{cases}$ $\therefore CB = CE$, $\therefore \triangle ABC \cong \triangle DEC(SAS)$. $\therefore AB = DE$. \therefore 方案①可行.

(2)可行.理由如下:

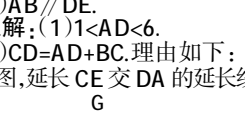
 $\therefore BF \perp AB$, $DE \perp BF$, $\therefore \angle B = \angle CDE = 90^\circ$.在 $\triangle ABC$ 和 $\triangle EDC$ 中, $\begin{cases} \angle B = \angle CDE, \\ CB = CD, \end{cases}$ $\therefore \angle BCA = \angle DCE$, $\therefore \triangle ABC \cong \triangle EDC(ASA)$. $\therefore AB = DE$. \therefore 方案②可行.

(3)AB//DE.

22.解:(1) $1 < AD < 6$.

(2)CD=AD+BC.理由如下:

如图,延长CE交DA的延长线于点G.



(第22题图)

 $\therefore AD \parallel BC$, $\therefore \angle G = \angle ECB$. $\therefore E$ 是AB的中点, $\therefore AE = BE$.在 $\triangle AEG$ 和 $\triangle BEC$ 中, $\begin{cases} \angle G = \angle ECB, \\ \angle AEG = \angle BEC, \end{cases}$ $\therefore AE = BE$.在 $\triangle AEG$ 和 $\triangle BEC$ 中, $\begin{cases} \angle G = \angle ECB, \\ \angle AEG = \angle BEC, \end{cases}$ $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$. $\therefore AE = BE$.

第7期

2版

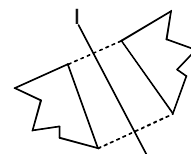
13.1.1 轴对称

1.D

2.D

3.③④

4.解:如图,直线l即为所求.



(第4题图)

13.1.2 线段的垂直平分线的性质

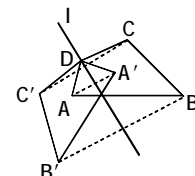
第1课时

1.A

2.解:(1) $\therefore DM$ 是线段AB的垂直平分线, $\therefore DA = DB$.同理, $EA = EC$. $\therefore \triangle ADE$ 的周长为5, $\therefore AD + DE + EA = 5$. $\therefore BC = DB + DE + EC = AD + DE + EA = 5$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).(2) $\therefore \triangle OBC$ 的周长为13cm, $\therefore OB + OC + BC = 13$. $\therefore OM$ 垂直平分AB, $\therefore OA = OB$.同理, $OA = OC$, $\therefore 2OA + BC = 13$. $\therefore OA = \frac{1}{2} \times (13 - 5) = 4$ (cm).

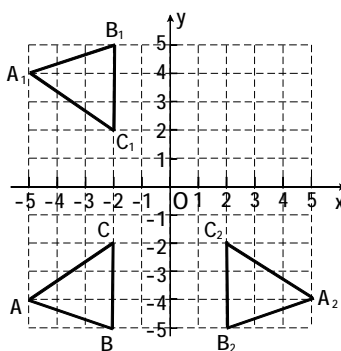
13.2 画轴对称图形

1.B

2.解:如图,四边形 $A'B'C'D$ 即为所求.

(第2题图)

3.A

4.解:(1)如图所示, $\triangle A_1B_1C_1$ 即为所求.

(第4题图)

(2)如图所示, $\triangle A_2B_2C_2$ 即为所求.

3版

一、选择题

1~3.ACC 4~6.CBB

二、填空题

7.-5 8.C

9.(-3,0) 10.70°

11.20 12.5cm

三、解答题

13.解:均是轴对称图形,如图所示:

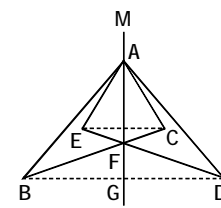


(第13题图)

14.解:点P为 $\angle AOB$ 的平分线和线段AB的垂直平分线的交点.图略.15.解:(1)D, $\angle C$.(2) $\therefore DF = BF = 6$, $\therefore EF = ED - DF = 9 - 6 = 3$.

故答案为:3.

(3)平行.理由:如图,连接BD和EC,AF交BD于点G.



(第15题图)

 $\therefore MN \perp EC$, $MN \perp DB$, $\therefore EC \parallel BD$. $\therefore BD$ 和 EC 的位置关系为平行.16.解:(1) $\therefore \angle BAC = 50^\circ$, AD 平分 $\angle BAC$, $\therefore \angle EAD = \frac{1}{2} \angle BAC = 25^\circ$. $\therefore DE \perp AB$, $\therefore \angle AED = 90^\circ$. $\therefore \angle EDA = 90^\circ - 25^\circ = 65^\circ$.(2)证明: $\therefore DE \perp AB$, $\therefore \angle AED = 90^\circ = \angle ACB$. $\therefore AD$ 平分 $\angle BAC$, $\therefore \angle DAE = \angle DAC$.又 $\therefore AD = AD$, $\therefore \triangle AED \cong \triangle ACD$. $\therefore AE = AC$, $DE = DC$. \therefore 点A,D均在线段CE的垂直平分线上. \therefore 直线AD是线段CE的垂直平分线.17.解:(1)如图, $\triangle A'B'C'$ 即为所求.(2) $A'(-1,0)$, $B'(-3,4)$, $C'(-4,1)$.(3)若 $\triangle PAB \cong \triangle CAB$,则 $BP = BC$,

如图,利用网格找点C关于AB的对称点P,

 \therefore 点P的坐标为(0,3). \therefore 点P的坐标为(0,3). \therefore 点P的坐标为(0,3).