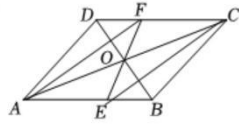


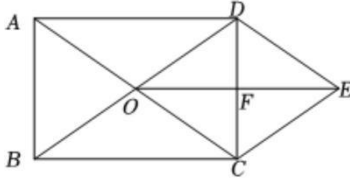
八年级数学周末作业（十一） 20250426 1-5 CBADD 6-9 ADDD 10.-1 11.x+y 分之 xy 12(1)-3m 分之 2n (2)x-1 分之 x (3) -3b 分之 5ac² (4)2(x-y) 13.6x²y² 14.144° 15.随机 16.6 根号 3+6cm 17 根号 34-5(连 EF 交 AC 于 O) 18.①②④(取 CD 中点 M,连 OM,证△OMF≌△ECF) 19(1)m+3 分之 m²+4m+1 (2)x 分之 x-1 20(1)1 (2)根号 3 23(1)60 (2)144 (3)105

(1)证明: ∵ 四边形 $ABCD$ 是平行四边形,
 $\therefore OA = OC, AB \parallel CD$,
 $\therefore \angle OAE = \angle OCF$,
 在 $\triangle OAE$ 和 $\triangle OCF$ 中,
 $\begin{cases} \angle OAE = \angle OCF \\ OA = OC \\ \angle AOE = \angle COF \end{cases}$,
 $\therefore \triangle OAE \cong \triangle OCF (ASA)$,
 $\therefore OE = OF$;
 (2)当 $EF \perp AC$ 时, 四边形 $AECF$ 是菱形.
 证明: $\because \triangle OAE \cong \triangle OCF$,
 $\therefore OA = OC, OE = OF$,
 $\therefore$ 四边形 $AECF$ 是平行四边形,
 $\because EF \perp AC$,
 $\therefore$ 四边形 $AECF$ 是菱形.



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(1)证明: ∵ 四边形 $ABCD$ 是矩形,
 $\therefore OA = OC, OB = OD, AC = BD$,
 $\therefore OC = \frac{1}{2} AC, OD = \frac{1}{2} BD$,
 $\therefore DE = \frac{1}{2} AC, OC = \frac{1}{2} AC$,
 $\therefore DE = OC$,
 $\therefore DE \parallel AC$,
 $\therefore$ 四边形 $OCED$ 是平行四边形,
 $\therefore OC = OD$,
 $\therefore$ 平行四边形 $OCED$ 是菱形;
 (2)如图, 设 OE 与 DC 交于点 F .



由 (1) 得: $OE \perp DC$, OE 与 DC 互相平分.
 $\therefore AO = DE, AO \parallel DE$,
 $\therefore$ 四边形 $AOED$ 是平行四边形,
 $\therefore AD = OE$,
 设 $OE = a, DC = b$,
 $\therefore$ 矩形 $ABCD$ 的面积是 40,
 $\therefore ab = 40$.
 $\therefore$ 菱形 $OCED$ 的边长是 5,
 $\therefore FO^2 + FC^2 = OC^2$,
 即 $(\frac{a}{2})^2 + (\frac{b}{2})^2 = 5^2$,
 $\therefore a^2 + b^2 = 100$,
 $\therefore (a+b)^2 = a^2 + b^2 + 2ab = 180$,
 $\therefore a+b = 6\sqrt{5}$.

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(1)
 $\because BC = 15, BF = 3$,
 $\therefore FC = BC - BF = 15 - 3 = 12$,
 $\because AB = BC, BD$ 平分 $\angle ABC$,
 $\therefore AD = DC$,
 $\therefore AE = EF$,
 $\therefore DE$ 是 $\triangle AFC$ 的中位线,
 $\therefore DE = \frac{1}{2} FC = \frac{1}{2} \times 12 = 6$;
 (2)①当 F 在线段 BC 上时, 由 (1) 得 $FC = 2DE = 10$,
 $\therefore BF = BC - FC = 15 - 10 = 5$;
 ②当 F 在线段 CB 延长线上时, 如图1,
 由 (1) 得 $FC = 2DE = 10 < BC = 15$, 此情况不成立;
 ③当 F 在线段 BC 延长线上时, 如图2, 由 (1) 得
 $FC = 2DE = 10$,
 $\therefore BF = BC + FC = 15 + 10 = 25$;

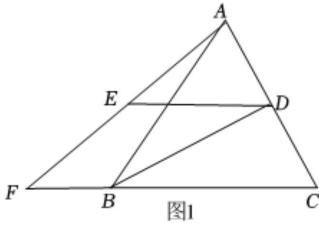


图1

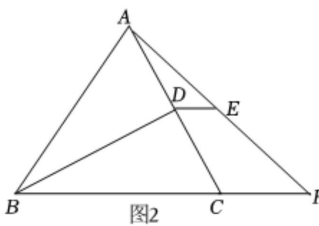


图2

综上所述: BF 的长为 5 或 25.

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