

初三数学参考答案

一. 1~5 DCBCA 6~10 BACCD

二. 11 .-1 , 12 $a>1/2$ 13 $\sqrt{73}$ 或5 14 25

15 $8100(1-x)^2=7600$ 16 $x<-1$ 或 $0<x<1$ 17. $(3, \frac{4}{3})$ 18. $\frac{1}{2}$

三. 19 略 20 (1) (2, -2) (2) (1,0) (3) 10

21. (1) $48m^3$ (2) $v = \frac{48}{t}$ (3) $8m^3$

22.

(1) 证明: $\because E$ 为 $Rt\triangle ABC$ 斜边 AB 中点,

$$\therefore CE = \frac{1}{2} AB = AE$$

$$\because AF=AE, \therefore AF=CE \therefore \angle 1=\angle 2, \angle 4=\angle 3$$

$\because D、E$ 为 $BC、AB$ 中点 $\therefore DE \parallel AC, \therefore \angle 1=\angle 3$

$\therefore \angle 1=\angle 2=\angle 3=\angle 4 \therefore \angle 5=\angle 6 \therefore CE \parallel AF, \therefore$ 结论 (4分)

(2) \because 四边形 $ACDF$ 是菱形 $\therefore AC=CE \therefore AE=AC \therefore AE=CE=AC$

$\therefore \triangle ACE$ 是正三角形 $\therefore \angle CAE=60^\circ$

$\because \angle ACB=90^\circ \therefore \angle B=90^\circ-60^\circ=30^\circ$ (4分)

23. 解: (1) 设每件衬衫应降价 x 元, 由题意得

$$(40-x)(20+2x)=1200 \quad (4分)$$

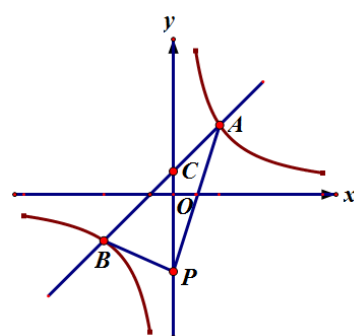
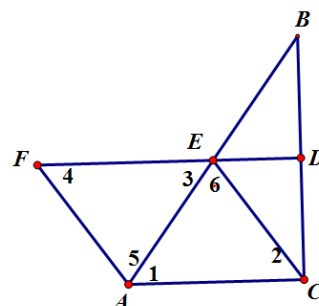
化简得 $x^2-30x+200=0$ 解得 $x=10$ 或 $x=20$ 答略

(2) 为减少库存量应降价 20 元出售。(4分)

24. 解: (1) 将 $A(2, 3)$ 代入 $y = \frac{m}{x}$ 得, $3 = \frac{m}{2}, m=6 \therefore y = \frac{6}{x}$

将 $(-3, n)$ 代入 $y = \frac{6}{x}$ 得, $n = \frac{6}{-3}, n=-2$

将 $B(-3, -2), A(2, 3)$ 代入 $y=kx+b$ 得



$$\begin{cases} 3k+b=3 \\ -3k+b=-2 \end{cases} \text{解得} \begin{cases} k=1 \\ b=1 \end{cases} \therefore y=x+1 \quad (4分)$$

(2) 设 AB 交 x 轴于 C , 则 $C(0, 1)$ 由题意得 $S_{\triangle ABP} = S_{\triangle BCP} + S_{\triangle ACP}$

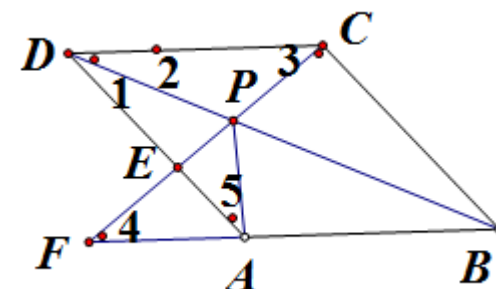
$$\therefore 5 = \frac{1}{2} CP \times 2 + \frac{1}{2} CP \times 3 \therefore CP=2, OP=3 \text{ 或 } 1 \therefore P(0, 3) \text{ 或 } (0, 1) \quad 4分$$

25. (1) $\triangle APD \cong \triangle CPD$

\therefore 四边形 $ABCD$ 为菱形

$\therefore AD=CD, \angle 1=\angle 2$

$\because AP=AP \therefore \triangle APD \cong \triangle CPD \quad 3分$



(2) \because 四边形 $ABCD$ 为菱形 $\therefore CD \parallel BA \therefore \angle 1=\angle 2$

$\because \triangle APD \cong \triangle CPD \therefore \angle 3=\angle 5 \therefore \angle 4=\angle 5 \therefore \angle APE=\angle FPA$

$\therefore \triangle APE \sim \triangle FPA \quad 3分$

(3) $PC^2=PE \cdot PF \because \triangle APD \cong \triangle CPD \therefore CP=AP, \because \triangle APE \sim \triangle FPA$

$$\therefore \frac{AP}{FP} = \frac{PE}{AP} \therefore AP^2=PE \cdot PF \therefore PC^2=PE \cdot PF \quad 4分$$

26. (1) 3, 9 2分

(2) 取 BF 中点 H , 连结 DH , 当 $n=2$ 时, $CD = \frac{1}{2} BC = \frac{1}{2} AC \therefore D$ 为 BC 中点, \therefore

$$DH (\parallel) \frac{1}{2} CF \therefore \angle 1+\angle 2=90=\angle 1+\angle 3 \therefore \angle 2=\angle 3$$

$$\therefore \triangle CDE \sim \triangle ACE \sim \triangle ADC \therefore \frac{DE}{CE} = \frac{CD}{AC} = \frac{CE}{AE} = \frac{1}{2} \therefore \frac{DE}{AE} = \frac{1}{4}$$

$$\because DH \parallel AC \therefore \frac{DH}{AF} = \frac{DE}{AE} = \frac{1}{4} \text{ 即 } DH = \frac{1}{4} AF \therefore DH = \frac{1}{2} CF \therefore AF=2CF \quad 6分$$

(3) $n = \frac{1+\sqrt{5}}{2} \quad 2分$

