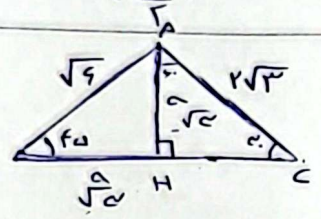
نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۲۰.... کلاس ...B.....

$$\left(\frac{\sqrt{2}}{2}-\frac{\sqrt{6}}{2}\right)\left(\frac{\sqrt{2}}{2}+\frac{\sqrt{3}}{2}\right) \Rightarrow$$

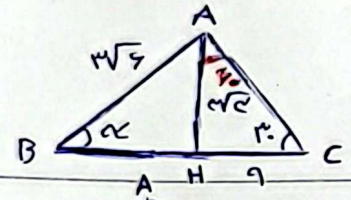
$$\hookrightarrow \frac{1}{2}-\frac{3}{4} \Rightarrow \boxed{-\frac{1}{4}}$$

$$\frac{1+6\times\left(\frac{\sqrt{6}}{6}\right)^2}{4\times\left(\frac{\sqrt{6}}{3}\right)^2+2\times\left(\frac{\sqrt{6}}{6}\right)^2}=\frac{1+\frac{1}{6}\times 6}{6+1}=\boxed{\frac{1}{2}}$$



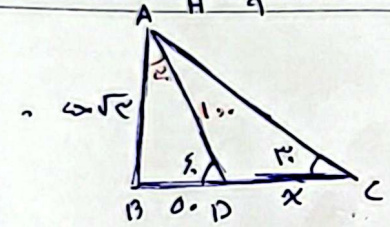
$$2a^2=6 \Rightarrow a^2=3 \Rightarrow a=\sqrt{3} \Rightarrow \frac{\sqrt{3}}{2\sqrt{2}}=\sin\hat{C} \Rightarrow \boxed{\hat{C}=45^\circ}$$

$$\hat{A}=60^\circ \Rightarrow \sin 60^\circ=\frac{\sqrt{3}}{2}=\frac{HC}{2\sqrt{2}} \Rightarrow HC=\frac{\sqrt{3}}{2}\times 2\sqrt{2}=\sqrt{6}$$



$$\sin 60^\circ=\frac{\sqrt{3}}{2}=\frac{9}{AC} \Rightarrow AC=\frac{18}{\sqrt{3}} \Rightarrow 6\sqrt{3} \Rightarrow \boxed{AH=3\sqrt{3}}$$

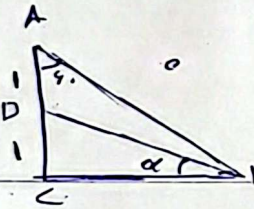
$$\sin\alpha=\frac{3\sqrt{2}}{3\sqrt{6}}=\frac{1}{\sqrt{3}}=\frac{\sqrt{3}}{3} \Rightarrow \boxed{\alpha=30^\circ}$$



$$AD=\frac{2}{\sqrt{3}}\times 50\sqrt{3}=100 \Rightarrow \boxed{BD=50}$$

$$AC=100\sqrt{3} \Rightarrow BC=\frac{\sqrt{3}}{2}\times 200\sqrt{3} \Rightarrow 100$$

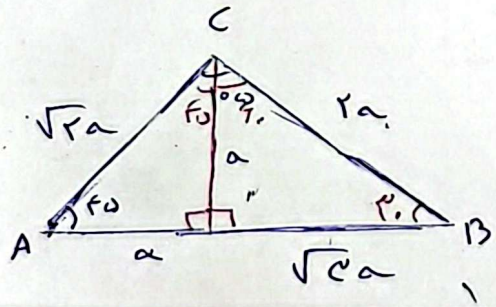
$$DC=100-50=\boxed{100}$$



$$\hat{B}=30^\circ \Rightarrow \sin 30^\circ=\frac{1}{2}=\frac{2}{AB} \Rightarrow \boxed{AB=4}$$

$$\sin 60^\circ=\frac{\sqrt{3}}{2}=\frac{x}{4}=x=2\sqrt{3}$$

$$BD^2=1^2+1^2 \Rightarrow BD=\sqrt{2} \Rightarrow \sin\alpha=\frac{1}{\sqrt{2}}=\boxed{\frac{\sqrt{2}}{2}}$$



$$\frac{AB}{AC}=\frac{a(1+\sqrt{3})}{\sqrt{2}a}=\frac{1+\sqrt{3}}{\sqrt{2}}$$

$$\boxed{\frac{\sqrt{6}+\sqrt{2}}{2}}$$

$$\frac{S_{\Delta ABE}}{S_{\Delta BDC}}=\frac{\frac{1}{2}\times 2\times 4\times\sin B}{\frac{1}{2}\times 3\times 6\times\sin B}=\boxed{\frac{4}{9}}$$

ب) $S = ab \cdot \sin\theta = 5 \times 4 \times \frac{\sqrt{2}}{2} = 5\sqrt{2}$

ج) $S = \frac{1}{2} d_1 d_2 \sin\theta \Rightarrow \frac{1}{2} \times 5\sqrt{2} \times 4 \times \frac{\sqrt{2}}{2} \Rightarrow 5\sqrt{2}$

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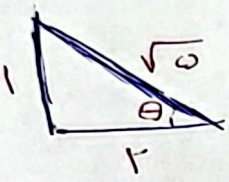
$\tan\theta = \frac{\Delta y}{\Delta x} = \frac{2}{4} = \frac{1}{2}$



$\Rightarrow \cos\theta = \frac{2}{\sqrt{5}} \Rightarrow \frac{2\sqrt{5}}{5}$

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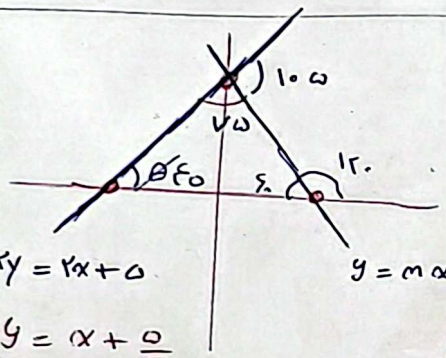

$\tan\theta = 1 \Rightarrow \boxed{\theta = 45}$

$2y = 2x + 5$

$y = mx + b$

$y = x + \frac{5}{2}$

$m = \tan 120 \Rightarrow -\sqrt{3}$

$b = \frac{5}{2}$

$-\frac{5\sqrt{3}}{2}$ mb

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$\frac{3\pi}{6} \Rightarrow \frac{5 \times 180}{6} = 150$

$f(150) = \cos(3 \times 150) + \sin(3 \times 0) - \tan(120)$

$\frac{\sqrt{3}}{2} - \frac{\sqrt{3}}{2} - (-\sqrt{3}) = \sqrt{3}$

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$$\frac{\sin\left(\frac{17\pi}{2} + x\right) + \cos\left(\frac{15\pi}{2} - x\right)}{\cos(3\pi + x) - \sin(5\pi - x)}$$

$$\frac{\cos x + \sin x}{-\sin x - \sin x} = \boxed{\frac{\cos x + \sin x}{-2\sin x}}$$

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