江苏省仪征中学2020届高三年级第一学期B版午间“3+1”(26)

2019年10月28

班级____________姓名______________学号___________评价________

请将填空题答案填在横线上，**并将每个题目的解答过程写在题目下方.**

1. 在平面直角坐标系xOy中，若双曲线$C:\dfrac{x^2}{a^2}-\dfrac{y^2}{b^2}=1(a>0,b>0)$的离心率为$\sqrt{10}$，则双曲线$C$的渐近线方程为________．

2. 已知$0<y<x<\pi$，且$\tan x\tan y=2,\sin x\sin y=\dfrac{1}{3}$，则$x-y=$________．

3. 在平面直角坐标xOy中，已知点$A(1,0),B(4,0)$，若直线$x-y+m=0$上存在点P使得$|PA|=\dfrac{1}{2}|PB|$，则实数m的取值范围是________．

4. 已知$0<\beta<\dfrac{\pi}{2}<\alpha<\dfrac{3\pi}{4},\cos\left(\dfrac{\pi}{4}-\alpha\right)=\dfrac{3}{5},\sin\left(\dfrac{3\pi}{4}+\beta\right)=\dfrac{5}{13}$，求

$(1)\cos\alpha;(2)\sin(\alpha+\beta).$

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1. $y=\pm 3x$

2. $\dfrac{\pi}{3}$

3. $\left[-2\sqrt{2},2\sqrt{2}\right]$

4.解：（1）$\because \dfrac{\pi}{2}<\alpha<\dfrac{3\pi}{4}\therefore -\dfrac{\pi}{2}<\dfrac{\pi}{4}-\alpha<-\dfrac{\pi}{4}\therefore \sin\left(\dfrac{\pi}{4}-\alpha\right)<0$

$\therefore \sin\left(\dfrac{\pi}{4}-\alpha\right)=-\sqrt{1-\cos^2\left(\dfrac{\pi}{4}-\alpha\right)}=-\dfrac{4}{5}$

$\therefore \cos\alpha=\cos\left[\dfrac{\pi}{4}-\left(\dfrac{\pi}{4}-\alpha\right)\right]=\cos\dfrac{\pi}{4}\cos\left(\dfrac{\pi}{4}-\alpha\right)+\sin\dfrac{\pi}{4}\sin\left(\dfrac{\pi}{4}-\alpha\right)=-\dfrac{\sqrt{2}}{10}$

（2）$\because 0<\beta<\dfrac{\pi}{2}\therefore \dfrac{3\pi}{4}<\beta+\dfrac{3\pi}{4}<\dfrac{5\pi}{4}\therefore \cos\left(\beta+\dfrac{3\pi}{4}\right)<0$

$\therefore \cos\left(\dfrac{3\pi}{4}+\beta\right)=-\sqrt{1-\sin^2\left(\dfrac{3\pi}{4}+\beta\right)}=-\dfrac{12}{13}$

$\therefore \sin(\alpha+\beta)=-\cos\left(\alpha+\beta+\dfrac{\pi}{2}\right)=-\cos\left[\left(\dfrac{3\pi}{4}+\beta\right)-\left(\dfrac{\pi}{4}-\alpha\right)\right]$

$=-\cos\left(\dfrac{3\pi}{4}+\beta\right)\cos\left(\dfrac{\pi}{4}-\alpha\right)-\sin\left(\dfrac{3\pi}{4}+\beta\right)\sin\left(\dfrac{\pi}{4}-\alpha\right)=\dfrac{56}{65}$