

แบบฝึกหัดดรื่อง ตรีโกณมิติ

ชื่อ-นามสกุล เลขประจำตัว No. 3

1. ขนาดของมุมที่มีหน่วยเป็นเรเดียนต่อไปนี้ มีขนาดกี่องศา

2. ขนาดของมุมที่มีหน่วยเป็นองศาต่อไปนี้ มีขนาดกี่เรเดียน
2.1) $90 \quad \circ \quad=-\quad \frac{\pi}{2}$
2.2) $315 \quad-\cdots=-\cdots \frac{7 \pi}{4}$
2.3) $60 \quad=-\frac{\pi}{3}$
2.4) $-330 \quad \circ=--\frac{11 \pi}{6}$
2.5) $-1350 \quad \circ=-\frac{15 \pi}{2}$
2.6) $1845 \circ=\frac{41 \pi}{4}$
2.7) $600 \quad 0 \quad=-\frac{10 \pi}{3}$
2.8) $-390 \quad=-\frac{13 \pi}{6}$
2.9) $\frac{90}{\pi} \quad 0.5$
2.10) $-\frac{720}{\pi} \cdots-\cdots$
3. กำหนด Condition $1=\cos (\theta)=\frac{2}{3}$ และCondition $2=\csc (\theta)<0$
3.1) จงวิเคราะห์ว่า $\theta$ อยู่ในจตุภาคใด
3.2) จงหา Quest $=\csc (\theta)$


ตอบ จตุภาคที่ $Q_{4}$
4. กำหนต Condition $1=\sin (\theta)<0$ และCondition $2=\tan (\theta)=-3$
4.1) จงวิเคราะห์ว่า $\theta$ อยู่ในจตุภาคใด
4.2) จงหา Quest $=\sec (\theta)$
$\sqrt{3^{2}+1^{2}}=\left.\sqrt{10}\right|_{3} \sec (\theta)=\frac{1}{\cos (\theta)}=\sqrt{10}$ atd $Q_{4}$ 7o $\sqrt{10}$
5. กำหนด $A=0 \quad B=\frac{\pi}{2} \quad 0 \leq \theta \leq \frac{\pi}{2} Q_{16} Q_{1}$

ถ้า Condition $=\cot (\theta)=\frac{4}{3}$ และ $A \leq \theta \leq B$ จงหา Quest $=\csc (\theta)-\sec (\theta)$

## $\sqrt{3^{2}+4^{2}}=5$

$$
\csc (\theta)-\sec (\theta)=\frac{1}{\sin \theta}-\frac{1}{\cos \theta}=\frac{5}{3}-\frac{5}{4}=\frac{5}{12}
$$

ตอบ

6. กำหนด $A=\frac{\pi}{2}, B=\pi \quad \frac{\pi}{2} \leqslant \theta \leqslant \pi$ qu $Q_{2}$

ถ้า Condition $=\tan (\theta)=\frac{-8}{7}$ และ $A \leq \theta \leq B$ จงหา Quest $=\csc (\theta)-\cos (\theta)$


$$
\csc (\theta)-\cos (\theta)=\frac{1}{\sin (\theta)}-(-\cos (\theta)) ; \text { 㫙期 } Q_{2}
$$

7

$$
=\frac{\sqrt{113}}{8}+\frac{7 \sqrt{113}}{113}=\frac{169 \sqrt{113}}{904}
$$

ตอu

7. กำหนด $A=\pi, B=\frac{3 \pi}{2} \quad \pi \leqslant \theta \leqslant \frac{3 \pi}{2} \quad \&_{6} Q_{3}$ ถ้า Condition $=\csc (\theta)=\frac{-5}{3}$ และ $A \leq \theta \leq B$ จงหา Quest $=\tan (\theta)-\cos (\theta)$

$$
\begin{aligned}
\tan (\theta)-\cos (\theta) & =\tan (\theta)-(-\cos \theta) \quad ; \text { as } R_{1} Q_{3} \\
& =\frac{3}{4}+\frac{4}{5}=\frac{31}{20}
\end{aligned}
$$

$\sqrt{5^{2}-3^{2}}=\sqrt{16} 24$
ตอบ.

$$
\frac{31}{20}
$$

8. กำหนด $A=\frac{3 \pi}{2}, B=2 \pi$

$$
\frac{3 \pi}{2} \leqslant \theta \leqslant 2 \pi \text { in } \hat{Q}_{\varphi}
$$ ถ้า Condition $=\cos (\theta)=\frac{1}{3}$ และ $A \leq \theta \leq B$ จงหา Quest $=\tan (\theta)+\sin (\theta)$

$$
\frac{\theta)}{1}=2 \sqrt{2}
$$

$$
\begin{aligned}
& N o l=\left[\begin{array}{cc}
.1=\pi & .6=-\frac{59 \pi}{4} \\
.2=\frac{5 \pi}{4} & .7=\frac{65 \pi}{6} \\
.3=-\frac{4 \pi}{3} & .8=-\frac{20 \pi}{3} \\
.4=\frac{5 \pi}{6} & .9=3 \\
.5=\frac{17 \pi}{2} & .10=-5.5
\end{array}\right], N o 2=\left[\begin{array}{cc}
.1=90^{\circ} & .6=1845^{\circ} \\
.2=315^{\circ} & .7=600^{\circ} \\
.3=60^{\circ} & .8=(-390)^{\circ} \\
.4=(-330)^{\circ} & .9=\left(\frac{90}{\pi}\right)^{\circ} \\
.5=(-1350)^{\circ} & .10=\left(-\frac{720}{\pi}\right)^{0}
\end{array}\right] \\
& \text { No3 }=\left[\text { Condition } 1=\left[\operatorname{Cos}(\theta)=\frac{2}{3}\right], \text { Condition } 2=[\operatorname{Csc}(\theta)<0], \text { Quest }=\operatorname{Csc}(\theta)\right],\left[\frac{\sqrt{:)}}{:( }\right] \\
& \text { No4 }=[\text { Condition } 1=[\operatorname{Sin}(\theta)<0], \text { Condition } 2=[\operatorname{Tan}(\theta)=-3], \text { Quest }=\operatorname{Sec}(\theta)], \quad,\left[\frac{\sqrt{:})}{:( }\right] \\
& \text { No5 }=\left[A=0, B=\frac{\pi}{2}, \text { Condition }=\left[\operatorname{Cot}(\theta)=\frac{4}{3}\right], \text { Quest }=[\operatorname{Csc}(\theta)-\operatorname{Sec}(\theta)]\right],\left[\frac{\sqrt{:)}}{:( }\right] \\
& \text { No6 }=\left[A=\frac{\pi}{2}, B=\pi, \text { Condition }=\left[\operatorname{Tan}(\theta)=\frac{-8}{7}\right], \text { Quest }=[\operatorname{Csc}(\theta)-\operatorname{Cos}(\theta)],,\left[\frac{\sqrt{:)}}{:( }\right]\right. \\
& \text { No7 }=\left[A=\pi, B=\frac{3 \pi}{2}, \text { Condition }=\left[\operatorname{Csc}(\theta)=\frac{-5}{3}\right], \text { Quest }=[\operatorname{Tan}(\theta)-\operatorname{Cos}(\theta)]\right],\left[\frac{\sqrt{:)}}{:( }\right] \\
& \text { No } 8=\left[A=\frac{3 \pi}{2}, B=2 \pi, \text { Condition }=\left[\operatorname{Cos}(\theta)=\frac{1}{3}\right], \text { Quest }=[\operatorname{Sin}(\theta)+\operatorname{Tan}(\theta)], \quad,\left[\frac{\sqrt{:})}{:( }\right]\right.
\end{aligned}
$$

[^0]\[

$$
\begin{gathered}
\text { Ans } 1=\left[\begin{array}{cc}
.1=\left(\pi=180^{\circ}\right) & .6=\left(-\frac{59 \pi}{4}=(-2655)^{\circ}\right) \\
.2=\left(\frac{5 \pi}{4}=225^{\circ}\right) & .7=\left(\frac{65 \pi}{6}=1950^{\circ}\right) \\
.3=\left(-\frac{4 \pi}{3}=(-240)^{\circ}\right) & .8=\left(-\frac{20 \pi}{3}=(-1200)^{\circ}\right) \\
.4=\left(\frac{5 \pi}{6}=150^{\circ}\right) & .9=\left(3=171.887^{\circ}\right) \\
.5=\left(\frac{17 \pi}{2}=1530^{\circ}\right) & .10=\left(-5.5=(-315.127)^{\mathrm{o}}\right)
\end{array}\right] \\
\text { Ans } 2=\left[\begin{array}{cc}
.1=\left(90^{\mathrm{o}}=\frac{\pi}{2}\right) & .6=\left(1845^{\mathrm{o}}=\frac{41 \pi}{4}\right) \\
.2=\left(315^{\mathrm{o}}=\frac{7 \pi}{4}\right) & .7=\left(600^{\circ}=\frac{10 \pi}{3}\right) \\
.3=\left(60^{\mathrm{o}}=\frac{\pi}{3}\right) & .8=\left((-390)^{\mathrm{o}}=-\frac{13 \pi}{6}\right) \\
.4=\left((-330)^{\mathrm{o}}=-\frac{11 \pi}{6}\right) & .9=\left(\left(\frac{90}{\pi}\right)^{\mathrm{o}}=0.500\right) \\
.5=\left((-1350)^{\circ}=-\frac{15 \pi}{2}\right) & .10=\left(\left(-\frac{720}{\pi}\right)^{\circ}=-4.000\right)
\end{array}\right]
\end{gathered}
$$
\]

$$
\text { Ans } 3=\left[.1=[\text { Quadrant }=Q 4], .2=\left(\operatorname{Csc}(\theta)=-\frac{3 \sqrt{5}}{5}\right)\right], \quad,\left[\frac{\sqrt{:})}{:( }\right]
$$

$$
\text { Ans } 4=[.1=[\text { Quadrant }=Q 4], .2=[\operatorname{Sec}(\theta)=\sqrt{10}]], \quad,\left[\frac{\sqrt{:})}{:( }\right]
$$

$$
\text { Ans } 5=\left[\operatorname{Csc}(\theta)-\operatorname{Sec}(\theta)=\frac{5}{12}\right], \quad,\left[\frac{\sqrt{:})}{:( }\right]
$$

$$
\text { Ans } 6=\left[\operatorname{Csc}(\theta)-\operatorname{Cos}(\theta)=\frac{169 \sqrt{113}}{904}\right], \quad\left[\frac{\sqrt{:})}{:( }\right]
$$

$$
\text { Ans } 7=\left[\operatorname{Tan}(\theta)-\operatorname{Cos}(\theta)=\frac{31}{20}\right], \quad,\left[\frac{\sqrt{:})}{:( }\right]
$$

$$
\text { Ans } 8=\left[\operatorname{Sin}(\theta)+\operatorname{Tan}(\theta)=-\frac{8 \sqrt{2}}{3}\right],\left[\frac{\sqrt{:})}{:( }\right]
$$


[^0]:    

