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$$1 \quad \check{U} \quad \grave{a} \quad F_3 \quad \grave{a}$$

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[illegible]
$$\mathfrak{Z} \quad \mathfrak{A} \quad \mathfrak{A} \, \zeta \quad \mathfrak{A} \quad \vee \, \mathfrak{A} \quad \mathfrak{A}_{\text{vn}} \quad \circ \quad \mathfrak{A} \quad \mathfrak{A} \quad \mathfrak{A}$$
$$\bar{w} \quad T \quad \cdot \quad \cdot \quad \bar{\omega} \quad \bar{I} \quad \mathfrak{z} \quad \grave{a} \quad \grave{a} \quad \bar{\omega}^{\vee} \quad \grave{a}$$

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$$120 \quad \beta \sim \mathbb{T} \qquad 12 \quad \beta \quad \hat{A} \qquad 23 \quad \beta \quad \text{“} \quad \mathbb{H} \quad \bar{w} \quad \text{”} \quad \mathbb{H} \mathbb{U} \mathbb{T} \qquad 12 \quad \beta$$
$$\hat{A} = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$$
$$\pi_{\mu} = \frac{1}{2}(\dot{x}_{\mu} - A_{\mu})^2 + \frac{1}{2}(A'_{\mu})^2 + \frac{1}{2}\partial_{\mu} \tilde{\phi} \partial^{\mu} \tilde{\phi} + \frac{1}{2}\partial_{\mu} \tilde{\psi} \partial^{\mu} \tilde{\psi}$$
$$\hat{A} \quad 22 \beta \quad \mathbb{T} \quad \wedge \quad 11 \beta \quad \hat{\mathbb{T}} \quad \sim \sim \quad 14 \beta$$

5 β 38 β F 21 β π

$$\psi_{3-\beta^+} \quad \mathbb{F} \quad \psi_{2-\beta^+} \quad \mathbb{V}$$
$$\sim 15 \text{ } ^\circ \quad \text{à} \quad \sim 4 \text{ } ^\circ$$
$$\Leftrightarrow \quad \text{r} \sim 1 \beta \text{ " " } \text{r} \sim 7/8 \text{ " " } \text{r} \sim 1 \beta \text{ " " } \text{r} \sim 7/8 \text{ " "}$$
$$\Leftrightarrow \quad , \quad \sim \quad 4 \beta \text{ “ ” } \quad , \quad \frac{7}{8} \text{ ” } \quad , \quad 1 \beta$$
$$\sim 10^{-1} \beta \quad , \quad \sim 7/8 \quad , \quad \sim 2 \beta \quad , \quad \sim 8 \beta^{1/2} \quad ,$$
$$1 \in \Pi \quad \dot{\rho} = 200 \quad \varphi = 1 \quad \hat{A}$$

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 , $\sim$ “ $P \Leftrightarrow$ ” r $\sim$: H Ψ ρ
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$\wedge \bar{w} \sim \mathbf{F} \mathfrak{z}$

$\bar{w}$,
 , $\breve{b}$ $\mathfrak{K}$ $\grave{t}$ $\Vdash$
 $\textcircled{P}$ $\mathfrak{r} \hat{A}$ $\mathfrak{H} \vee \bar{w} \mathfrak{F} \sim$ Ψ $\Vdash \hat{A}^\pi$. ($\mathcal{A}$)
() $\mathcal{A}$ $\mathfrak{n}$
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 $\bar{w}$ $\hat{A}$ $\sim^\pi$ $\mathbf{F} \mathfrak{z} \mathfrak{U}$ $\bar{I}$
 $\mathfrak{U} \mathfrak{H}$ $\bar{w}$ $\mathfrak{r}$ $\mathfrak{G}$ $\grave{a}$ $\mathfrak{Q}^\sim$ $15 \beta \mathfrak{T}$ $\wedge$ $\mathfrak{G}$ $\grave{a}$ $\mathfrak{Q}^\sim$ $\grave{a} \dagger$ $\grave{a}$
 $\grave{a}$ — $\grave{a}$ $\grave{a}$ $\grave{a}$ $\grave{a}$ $\mathfrak{Q} \grave{a}$ $\grave{a}$ $\grave{a}$
 $\grave{a}$ $\breve{u} \mathfrak{H} \grave{a}$ $\mathfrak{Q}$ $\sim$ $\grave{a} \mathfrak{z} \beta \hat{\mathfrak{z}} \mathfrak{F}$ $\wedge$ — $\grave{a} \dagger$ $\grave{a}$ $\Leftrightarrow$
 $\sim \sim$ $\breve{u}$ $\mathfrak{F}$ Π $\mathbf{F}$ $\hat{A}$
 $\sim$ $\Pi \mathfrak{W}$ $\mathfrak{F} \hat{A}$ $\mathfrak{H}$ $\Vdash$ $\mathfrak{z} \mathfrak{z}$ $\acute{t}$
 $\mathfrak{H} \hat{A}$ $\mathfrak{z}$ $\grave{a}$ $\mathfrak{H}$ $\mathcal{A}^\sim$ $\mathfrak{U} \bar{w}$ $\Leftrightarrow$
 $\mathbf{F}$ $\sim$ $\acute{t} \mathfrak{T} \mathfrak{T}$ $1_{\perp}$, $2_{\perp}$ $\mathfrak{F}$
 $5_{\perp} \hat{A} \bar{w}$ $\mathfrak{r}$ $\mathbf{A} \mathfrak{F}$ $\mathfrak{z} \mathfrak{z}$ $\mathfrak{b}^\sim$ $\Vdash$
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$\mathbf{r}^\circ$

$\acute{t}_{\mathfrak{r}}$ $\wedge$ $\tilde{E}$ $\grave{a}$ $\grave{a}$ $\sim \grave{a} \text{‰}$
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$\mathbf{Z}^\circ \mathcal{A}$

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(4) γ $\mathfrak{b}$ ε $\mathfrak{b}$ $\hat{A}$ **(5)** $\mathfrak{G}$ γ $\mathfrak{r}$ $\mathfrak{D}$
 γ $\hat{A}$ **(6)** $\mathfrak{G}$ γ $\mathfrak{f}$ $\mathfrak{N}_2$ $\hat{A}$ **(7)**
 γ 10nm $\mathfrak{r}$ $\bar{\mathfrak{w}}$ $\mathfrak{f}$ $\hat{A}$ γ $\mathfrak{H}$ γ
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 γ **(1)** GaN $\mathfrak{b}$ LED/ LED $\mathfrak{b}$ $\mathfrak{M}$ $\mathfrak{r}$ γ **(2)**
 GaN $\mathfrak{r}$ $/$ $\mathfrak{D}$ **(3)** Al $\mathfrak{N}_2$ $\mathfrak{f}$ $\mathfrak{M}$ $\mathfrak{r}$
 $\mathfrak{b}$ $\mathfrak{D}$ **(4)** In $\mathfrak{N}_2$ $\mathfrak{f}$ $\mathfrak{M}$ $\mathfrak{r}$ $\mathfrak{b}$ $\mathfrak{D}$ γ $\hat{5}$ GaN
 $\mathfrak{b}$ γ **(6)** GaN AlN γ $\hat{7}$ $\mathfrak{M}$ $\mathfrak{r}$
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$\dot{\rho} \sim 1^{\sim}$ $\ddot{\phi} \sim L \sim 2^{\sim}$
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 $\mathfrak{J}$ $_{\Gamma\mathfrak{u}}$ $\mathfrak{F}$ $\grave{a}$ $\mathfrak{J}$ $($ $\grave{a}$ $\mathfrak{F}$ $\grave{a}$ $\grave{a}$
 $\grave{a}$ $\grave{a}$ $\mathfrak{T}$ $\grave{a}$ $_{\Gamma}$ $\grave{a}$
 $\parallel$ $\mathcal{D}_p$ $\mathfrak{J}$ $\grave{a}$ $\pm$ $\mathfrak{F}$ $)$ $_{\Gamma\mathfrak{u}}$ $\mathfrak{F}$ $_{\mathfrak{I}}$ $\grave{a}$ $\mathfrak{J}$
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$$\begin{aligned}
& \bar{a} \quad \mathbb{H} \quad \bar{w} \quad \quad \quad \dot{\rho} \quad F \quad \bar{w} \quad : \quad \mathbb{H} \\
& \hat{A} \quad \mathbb{H} \quad 50\% \quad \mathbb{H} \quad \quad \quad \mathbb{L} \quad \mathbb{H} \quad 0.5-2 \quad \quad \quad \Psi \\
1 \quad \mathbb{H} \quad \mathbb{H}^+ \quad \bar{w} \quad \Psi \quad \hat{A} \quad 1 \quad \mathbb{H} \quad \sim \quad 20\% \quad \mathbb{H} \quad \mathbb{H} \quad 1 \\
& \quad \quad \quad 20\% \quad \dot{\rho} \quad \mathbb{H} \quad 1 \quad \quad \quad \sim \quad 25\% \quad \dot{\rho} \quad \quad \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad 35\% \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \hat{A} \\
& \quad \quad \quad \bar{a} \quad \bar{R} \quad \bar{a} \quad \quad \quad \bar{a} \quad \mathbb{H} \quad \mathbb{H} \quad \bar{a} \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \bar{w} \quad \mathbb{H} \quad \quad \quad \hat{A} \quad \mathbb{H} \\
& \quad \quad \quad \bar{I} \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \bar{R} \quad \mathbb{H} \quad \bar{a} \quad \bar{R} \quad \quad \quad \bar{a} \quad \mathbb{H} \\
& \quad \quad \quad \bar{a} \quad \quad \quad \mathbb{H} \quad \hat{A} \\
& \quad \quad \quad \bar{R} \quad \mathbb{H} \quad \quad \quad \bar{a} \quad N_0 \quad \bar{a} \quad \mathbb{H} \quad \mathbb{H} \\
& \quad \quad \quad \bar{a} \quad \mathbb{H} \quad \bar{a} \quad \bar{a} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \bar{R} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \bar{R} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \\
& \quad \quad \quad \bar{R} \quad \quad \quad \mathbb{H} \quad \quad \quad \hat{A} \\
& \quad \quad \quad \bar{R} \quad \quad \quad \mathbb{H} \quad \dot{\rho} \quad \quad \quad \mathbb{H} \quad \mathbb{H} \\
& \quad \quad \quad \bar{R} \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \bar{R} \quad \bar{a} \quad \bar{R} \quad \mathbb{H} \quad \bar{a} \quad \bar{R} \quad \bar{a} \quad \mathbb{H} \\
& \quad \quad \quad \Leftrightarrow \quad \quad \quad = \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \bar{R} \quad \quad \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \bar{R} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \hat{A} \\
& \quad \quad \quad \mathbb{H} \quad \quad \quad \bar{a} \quad \quad \quad \bar{a} \quad \mathbb{H} \quad \bar{a} \quad \mathbb{H} \\
& \quad \quad \quad \bar{a} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad N_0 \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \quad N_0 \quad \mathbb{H} \\
& \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \dot{\rho} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \bar{R} \quad \mathbb{H} \quad \quad \quad \quad \quad \quad \bar{a} \quad \mathbb{H} \\
& \quad \quad \quad \bar{R} \quad \mathbb{H} \quad \mathbb{H} \quad \mathbb{H} \quad \bar{R} \quad \quad \quad \hat{A} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \quad \quad \mathbb{H} \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad \bar{a} \quad \quad \quad \bar{R} \quad \bar{a} \quad \mathbb{H} \quad \mathbb{H} \quad \bar{R} \quad \mathbb{H} \\
& \quad \quad \quad \mathbb{H} \quad \mathbb{H} \quad \quad \quad \hat{A}
\end{aligned}$$

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