Sample A
$$A_4 = \frac{i}{2} \frac{\nabla \rho}{\rho} \cdot \vec{\tau}$$

Pix2tex
$$A_4 = 2 \frac{\nabla \rho}{\rho} \cdot \vec{\tau}$$

Texify
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Nougat
$$A_4 = \frac{\mathrm{i}}{2} \frac{\nabla \rho}{\rho} \cdot \vec{\tau}$$
 UniMERNet $A_4 = \frac{\mathrm{i}}{2} \frac{\nabla \rho}{\rho} \cdot \vec{\tau}$

Sample B

Pix2tex

Render Failed



Texify

$$9 \times 9 + 13 \times 13 - (7 + 7 + 1) = 243$$

Nougat

Render Failed



UniMERNet
$$9 \times 9 + 13 \times 13 - (3 + 3 + 1) = 243$$

Sample C

$$\begin{split} \left(\widetilde{C}_{face}\right)_{CDS} &= \begin{cases} \min\left(\frac{\widetilde{C}_{D}}{Cou},1\right), & 0 \leq \widetilde{C}_{D} \leq 1 \; ; \; 0 < \mathrm{Cou} \leq 1/3 \\ \min\left(3\widetilde{C}_{D},1\right), & 0 \leq \widetilde{C}_{D} \leq 1 \; ; \; 1/3 < \mathrm{Cou} \leq 1 \\ \widetilde{C}_{D}, & \widetilde{C}_{D} < 0 \; ; \; \widetilde{C}_{D} > 1 \end{cases} \\ \left(\widetilde{C}_{face}\right)_{HR} &= \begin{cases} 3\widetilde{C}_{D}, & 0 \leq \widetilde{C}_{D} < 1/5 \\ 0.5 + 0.5\widetilde{C}_{D}, & 1/5 \leq \widetilde{C}_{D} < 1/2 \\ 3/8 + 3/4\widetilde{C}_{D}, & 1/2 \leq \widetilde{C}_{D} < 5/6 \\ 1, & 5/6 \leq \widetilde{C}_{D} \leq 1 \\ \widetilde{C}_{D}, & \widetilde{C}_{D} < 0 \; ; \; \widetilde{C}_{D} > 1 \end{cases} \\ \gamma_{face} &= \min\left[\left(\cos\theta\right)^{4},1\right] \end{split}$$

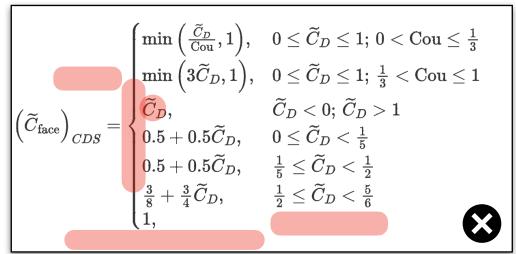
Pix2tex



Nougat

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ight), & 0 \leq ilde{C}_D \leq 1\,;\, 0 < ext{Cou} \leq 1/3 \ \min\left(3 ilde{C}_D,1
ight), & 0 \leq ilde{C}_D \leq 1\,;\, 1/3 < ext{Cou} \leq 1 \ ilde{C}_D, & ilde{C}_D < 0\,;\, ilde{C}_D > 1 \end{aligned} \ egin{aligned} igg(ilde{C}_{face}igg)_{HR} = egin{aligned} 3 ilde{C}_D, & 0 \leq ilde{C}_D < 1/5 \ 0.5 + 0.5 ilde{C}_D, & 1/5 \leq ilde{C}_D < 1/2 \ 3/8 + 3/4 ilde{C}_D, & 1/2 \leq ilde{C}_D < 5/6 \ 1, & 5/6 \leq ilde{C}_D \leq 1 \ ilde{C}_D, & ilde{C}_D < 0\,;\, ilde{C}_D > 1 \end{aligned} \ egin{aligned} egin{aligned} (cos heta)^4, 1 \end{bmatrix} \end{aligned}$$

Texify*



UniMERNet

$$egin{array}{lll} \left(\widetilde{C}_{face}
ight)_{CDS} &= egin{array}{lll} min \left(rac{\widetilde{C}_D}{Cou}, 1
ight), & 0 \leq \widetilde{\mathrm{C}}_D \leq 1 \, ; \, 0 < \mathrm{Cou} \, \leq \, 1/3 \ min \left(3\widetilde{C}_D, 1
ight), & 0 \leq \widetilde{\mathrm{C}}_D \leq 1 \, ; \, 1/3 < \mathrm{Cou} \, \leq \, 1 \ \widetilde{C}_D, & \widetilde{\mathrm{C}}_D < 0 \, ; \, \widetilde{\mathrm{C}}_D > 1 \ \end{array} \ egin{array}{lll} \left(\widetilde{C}_{face}
ight)_{HR} &= egin{array}{lll} 3\widetilde{C}_D, & 0 \leq \widetilde{\mathrm{C}}_D < 1/5 \ 0.5 + 0.5\widetilde{C}_D, & 1/5 \leq \mathrm{C}_D < 1/2 \ 3/8 + 3/4\widetilde{C}_D, & 1/2 \leq \widetilde{\mathrm{C}}_D < 5/6 \ 1, & 5/6 \leq \widetilde{\mathrm{C}}_D \leq 1 \ \widetilde{C}_D, & \widetilde{\mathrm{C}}_D < 0 \, ; \, \widetilde{\mathrm{C}}_D > 1 \ \end{array} \ egin{array}{lll} \gamma_{face} &= min \left[(cos heta)^4, 1
ight] \end{array}$$