

Übungen zur Supersymmetrie - WS06/07

Blatt 2 - 9. November 2006

Besprechung am 16. November 2006

5. Beweisen Sie:

$$(\psi\phi)\bar{\chi}_{\dot{\beta}} = -\frac{1}{2}(\phi\sigma^m\bar{\chi})(\psi\sigma^m)_{\dot{\beta}}$$

6. Zeigen Sie:

$$\delta_{\xi}\left(AF - \frac{1}{2}\psi\psi\right) = i\sqrt{2}\xi\bar{\sigma}^n\partial_n(A\psi)$$

7. *Zusatzaufgabe:* Zeigen Sie:

•

$$\epsilon^{\alpha\beta}\frac{\partial}{\partial\theta^{\beta}} = -\frac{\partial}{\partial\theta_{\alpha}}$$

•

$$\epsilon^{\alpha\beta}\frac{\partial}{\partial\theta^{\alpha}}\frac{\partial}{\partial\theta^{\beta}}\theta\theta = 4 = \epsilon_{\dot{\alpha}\dot{\beta}}\frac{\partial}{\partial\bar{\theta}_{\dot{\alpha}}}\frac{\partial}{\partial\bar{\theta}_{\dot{\beta}}}\bar{\theta}\bar{\theta}$$