Joint Group Meeting Problems

Propose Plausible Mechanism for the Following Transformations:

1.
$$\frac{\text{pyridine}}{160 \text{ °C, 73\%}}$$
2.
$$\frac{\text{CO}_2\text{Et}}{\text{NC}} = \frac{\text{NC}}{\text{PPh}_3} = \frac{\text{NC}}{\text{NC}} = \frac{\text{CO}_2\text{Et}}{\text{CO}_2\text{Et}}$$

Hint: Ph₃P is a catalyst for the above transformation

NC

2a: R = Ar

2b: R = Me

3a: R = Ar

3b: R = Me