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• The structure of methyl 4-aminobenzoate, (**E**), is given below.

(E) b

Give the molecular formula of compound (\mathbf{E}) .

Name the functional groups in molecule (E) indicated by the boxes "a" and "b".

a: b:

Give the structure(s) of all organic products formed when compound (**E**) is treated with the following reagents. If no reaction occurs, write "NO REACTION".

hot NaOH (4 M)

cold HCl (1 M)

hot HCl (4 M)