

# ΓΛΥΚΕΙΟΥ ΜΕΡΟΣ Α

**15.6 1)**

$$9x^2 + 2\sigma vvx + 4\eta \mu x + \frac{6}{\sigma vv^2 x} + \frac{7}{\eta \mu^2 x} + 2e^x - \frac{9}{x \ln 10} + \frac{8^4}{2\sqrt{x}} - 4 \cdot 3^x \ln 3 - \frac{4}{x^2}$$

**15.6 2)**

$$20x^3 + 3\sigma vvx + 2\eta \mu x - \frac{1}{\sigma vv^2 x} - \frac{1}{\eta \mu^2 x} + 7e^x + \frac{1}{x} + \frac{1}{2\sqrt{x}} - 2 \cdot 5^x \ln 5 - \frac{2}{x^2}$$

**15.6 3)**

$$-8x^7 - 8\sigma vvx - 3\eta \mu x - \frac{2}{\sigma vv^2 x} - \frac{4}{\eta \mu^2 x} + 5e^x + \frac{3}{x} - \frac{1}{2\sqrt{x}} + 3 \cdot 8^x \ln 8 + \frac{4}{x^2}$$

**15.6 4)**

$$40x^4 + 4\sigma vvx + 2\eta \mu x + \frac{6}{\sigma vv^2 x} + \frac{9}{\eta \mu^2 x} + 3e^x - \frac{4}{x} + \frac{7}{2\sqrt{x}} - 2 \cdot 7^x \ln 7 + \frac{4}{x^2}$$

**15.6 5)**

$$-12x^5 + 5\sigma vvx + 3\eta \mu x + \frac{4}{\sigma vv^2 x} + \frac{6}{\eta \mu^2 x} - 8e^x + \frac{5}{x} + \frac{3}{2\sqrt{x}} + 6 \cdot 2^x \ln 2 + \frac{3}{x^2}$$

**15.6 6)**

$$40x^3 - 3\sigma vvx + 4\eta \mu x + \frac{6}{\sigma vv^2 x} - \frac{9}{\eta \mu^2 x} - 2e^x + \frac{2}{x} + \frac{2}{2\sqrt{x}} + 2 \cdot 6^x \ln 6 - \frac{3}{x^2}$$

**15.6 7)**

$$60x^9 + 7\sigma vvx + 8\eta \mu x + \frac{4}{\sigma vv^2 x} + \frac{2}{\eta \mu^2 x} + 5e^x - \frac{3}{x} + \frac{1}{2\sqrt{x}} + 7 \cdot 4^x \ln 4 + \frac{3}{x^2}$$

**15.6 8)**

$$-6x^2 + 9\sigma vvx + 4\eta \mu x + \frac{3}{\sigma vv^2 x} + \frac{5}{\eta \mu^2 x} + 7e^x - \frac{2}{x} + \frac{3}{2\sqrt{x}} - 3 \cdot 5^x \ln 5 + \frac{2}{x^2}$$

**15.6 9)**

$$20x^{14} - \frac{3\sigma vvx}{4} + \frac{6}{x^2} + \frac{2}{\sqrt{x}} + \frac{3e^x - 4^x \ln 4}{5} + \frac{4}{\sqrt[3]{x^7}}$$