

Z wykładu $E(x^k) = M_x^{(k)}(0)$

$$M_X(t) = \frac{e^t + e^{-t} + 4}{6} = \frac{e^t}{6} + \frac{e^{-t}}{6} + \frac{4}{6}$$

$$M'_X(t) = \frac{e^t}{6} - \frac{e^{-t}}{6}$$

$$M''_X(t) = \frac{e^t}{6} + \frac{e^{-t}}{6}$$

$$M'''_X(t) = \frac{e^t}{6} - \frac{e^{-t}}{6}$$

⋮

$$M^{(k)}_X(t) = \frac{e^t}{6} + (-1)^k \frac{e^{-t}}{6}$$

Wtedy $M^{(k)}_X(0) = \frac{1}{6} + \frac{(-1)^k}{6}$