

$$\left(-2x^3 - \frac{1}{3x}\right)^{11}$$

• 4. čl. $\binom{11}{6} (-2x^3)^5 \left(-\frac{1}{3x}\right)^6 \rightarrow \binom{11}{6} \cdot (-2)^5 \cdot \left(-\frac{1}{3}\right)^6 =$
 $= \cancel{462}^{154} \cdot (-32) \cdot \frac{1}{243} = \boxed{-\frac{4928}{243}}$

• k-ty čl. : $\binom{11}{k-1} \cdot (-2x^3)^{12-k} \left(-\frac{1}{3x}\right)^{k-1} \rightarrow x^{3(12-k)} \cdot x^{-1(k-1)} =$
 $= x^{36-3k-k+1} = x^{37-4k}$

abs. čl. $\rightarrow 37-4k=0 \rightarrow k = \frac{37}{4} \rightarrow$ neke \rightarrow

abs. čl. neobstane

• 4. čl. : $\binom{11}{3} (-2x^3)^8 \left(-\frac{1}{3x}\right)^3 \rightarrow x^{3 \cdot 8 - 3} = x^{21} \rightarrow$ stupen 21

$(1-2i)^7 = 1 + 7 \cdot (-2i) + 21 \cdot (-2i)^2 + 35 \cdot (-2i)^3 + 35 \cdot (-2i)^4 + 21 \cdot (-2i)^5 + 7 \cdot (-2i)^6 + (-2i)^7$
 $= 1 - 14i - 84 - 280i^3 + 560i^4 - 672i^5 + 448i^6 - 128i^7$
 $= -83 - 14i + 280i + 560 - 672i - 448 + 128i =$
 $= \boxed{29 - 278i}$

$\left(\frac{1}{2}y^2 - \frac{2}{y^3}\right)^{16} \rightarrow$ k-ty čl. : $\binom{16}{k-1} \left(\frac{y^2}{2}\right)^{14-k} \left(-\frac{2}{y^3}\right)^{k-1} \rightarrow$ stupen 4?
 $2(14-k) - 3(k-1)$
 $\rightarrow 34 - 2k - 3k + 3 = 4 \rightarrow 37 - 5k = 4 \rightarrow$

$\rightarrow k = \frac{41}{5} \rightarrow$ neke; $k \in \{1; 2; \dots; 14\}$

bikvadratny čl. neobstane