NEG. EKSPONENTTI JA EKSPONENTTI 0.

$$\frac{x^3}{x^7} = x^{3-7} = x^{-4}$$

SAMAT

SAMA TOISIN

$$\frac{x^3}{x^7} = \frac{x \cdot x \cdot x}{x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x} = \frac{1}{x \cdot x \cdot x \cdot x} = \frac{1}{x^4}$$

$$\Rightarrow x^{-4} = \frac{1}{x^4}$$

YLEISESTI

$$x^{-m} = \frac{1}{x^m}$$

Esm.

a) $5^{-4} = \frac{1}{5^4} = \frac{1}{625}$

b) $\frac{2}{3^{-2}} = 2 \cdot 3^2 = 2 \cdot 9 = 18$

c) $x^7 \cdot x^8 \cdot x^{-5} = x^{7+8-5} = x^{10}$

TA1

$\frac{x^7 \cdot x^8}{x^5} = \frac{x^{15}}{x^5} = x^{15-5} = x^{10}$

$$\frac{a^m}{a^m} = a^{m-m} = a^0$$

SKRAKT

TOISIN

$$\frac{a^m}{a^m} = \frac{\overbrace{a \cdot a \cdot \ldots \cdot a}^{m \text{ KPL}}}{\underbrace{a \cdot a \cdot \ldots \cdot a}_{m \text{ KPL}}} = \frac{1}{1} = 1$$

$$\boxed{a^0 = 1 \,, \; a \neq 0}$$

Esim.

$$(789657 + 5x^3 + 6x^2 - 7y^5)^0 = 1$$

237 c)

$$\left(-1\tfrac{1}{3}\right)^{-2} = \left(-\tfrac{4}{3}\right)^{-2} = \frac{1}{\left(-\frac{4}{3}\right)^2} = \frac{1}{\frac{16}{9}}$$

$$= \frac{9}{16}$$