

7.1 Exponent Laws Review

$$a^m \cdot a^n = \underline{\hspace{2cm}}$$

$$\frac{a^m}{a^n} = \underline{\hspace{2cm}}$$

$$(a^m)^n = \underline{\hspace{2cm}}$$

$$\sqrt[n]{a^m} = \underline{\hspace{2cm}}$$

$$(a \cdot b)^m = \underline{\hspace{2cm}}$$

$$\left(\frac{a}{b}\right)^m = \underline{\hspace{2cm}}$$

$$a^{-m} = \underline{\hspace{2cm}}$$

$$a^0 = \underline{\hspace{1cm}}, \text{ as long as } \underline{\hspace{2cm}}$$

Ex 1 Solve

a. $4^{x+1} = 2^{x-1}$

b. $9^{3x+1} = 27^x$

Ex 2 Factor by removing the lowest power

a. $3^{x+2} - 3^x$

b. $x^2 - x^{-3}$

c. $\sqrt{x} + \frac{1}{\sqrt{x}}$

Ex 3 Solve

a. $3^{x+2} - 3^x = 216$

b. $4^{x+3} + 4^x = 260$

c. $2^{2x} - 12 \cdot 2^x + 32 = 0$

p.447#2-4,6,7