

More Math in L<sup>A</sup>T<sub>E</sub>X  
Monday, January 27, 2014

**Theorem 1** *Let  $G$  be an abelian group and let*

$$c^n = c * c * c * \dots * c \text{ for } n \text{ factors } c$$

*, where  $c \in G$  and  $n \in \mathbb{Z}^+$  (positive integers). Give a mathematical induction proof that*

$$(a * b)^n = (a^n) * (b^n) \forall a, b \in G \tag{1}$$

New example from the Practice.pdf on BlackBoard

$$\begin{aligned} \frac{dx_1}{dt} &= x_1 - 2x_2 \\ \frac{dx_1}{dt} &= 5x_1 - x_2 \end{aligned}$$

More words here