

CSC165 fall 2017

Mathematical expression:
induction: different starting points, etc.

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Web page:

<http://www.teach.cs.toronto.edu/~heap/165/F17/>

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Using **Course notes: more Induction**



Outline

notes



review induction parts

- ▶ claim
- ▶ base case
- ▶ inductive step



more domino logistics....

$$7^0 \equiv 1 \pmod{6}$$

$$7^1 \equiv 1 \pmod{6}$$

$$7^2 \equiv 1 \pmod{6}$$

$$7^3 \equiv 1 \pmod{6}$$

$$7^4 \equiv 1 \pmod{6}$$

$$7^5 \equiv 1 \pmod{6}$$

... “etc.”

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... “etc.”



$$2n + 1 < 2^n$$

$$\forall n \in \mathbb{N}, 3^n \geq n^3$$



$$\forall x, y \in \mathbb{N}, \forall n \in \mathbb{N}, x - y \mid x^n - y^n$$

order of introductions...



every set with n elements has 2^n subsets

more order of introductions...



Notes