

**Universal Rule of Instantiation:**

*If some property is true for everything in a set, then it is true of any particular thing in the set.*

All dogs have fur  
Fluffy is a dog  
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Universal fact for domain  
Particular instance in domain

Fluffy has fur

Conclusion

**Facts from algebra:**

1.  $\forall x \in \mathbb{R}, x^1 = x$
2.  $\forall x \in \mathbb{R}, \forall m, n \in \mathbb{Z}, x^m * x^n = x^{m+n}$

**Definition of even**

$$\forall n \in \mathbb{Z}, n \text{ is even IFF } \exists k \in \mathbb{Z} \ni n = 2k$$

**Definition:** To say that an **argument form is valid** means the following: No matter what particular predicates are substituted for the predicate symbols in its premises, *if the resulting premise statements are all true, then the conclusion is also true.* An **argument is called valid** if, and only if, its form is valid.