

B4M36SMU

Third tutorial

Monday 6th March, 2017

Animals dataset

	Bat	Dolphin	Earthworm	Bee	Carp	T-Rex	Penguin	Parrot	Goat	Platypus	Elephant	Frog	Hippo
Flies	✓			✓				✓					
Hair	✓								✓	✓			
Fins		✓			✓					✓		✓	
Feathers							✓	✓					
Scales					✓	✓							
Breathes air	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Bones	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
Funky nose		✓									✓		
Mammal	✓	✓							✓	✓	✓		✓

▶ Mammal $\equiv \neg$ Feathers $\wedge \neg$ Scales \wedge Bones \wedge Breathes air ?

- ▶ Mammal $\equiv \neg \text{Feathers} \wedge \neg \text{Scales} \wedge \text{Bones} \wedge \text{Breathes air} ?$
- ▶ Frog $\Leftarrow \neg \text{Feathers} \wedge \neg \text{Scales} \wedge \text{Bones} \wedge \text{Breathes air}$

- ▶ $\text{Mammal} \Rightarrow \neg \text{Feathers} \wedge \neg \text{Scales} \wedge \text{Bones} \wedge \text{Breathes air}$
 - ▶ Condition satisfied by Frog
- ▶ $\text{Mammal} \Leftarrow \text{Hair} \vee \text{Funky nose}$
 - ▶ Condition not satisfied by Hippo