1 Object?

The operation *object*? will return a boolean which indicates if the passed in argument is a mapping of Key(s) to Value(s)

$$object?\,(Arg) = true \vee false$$

such that if KV is a collection of Key Value pair(s) $< k_0v_{k_0}, k_1v_{k_1}, k_2v_{k_2}, k_3v_{k_3} >$ where

$$k_0 = abc \ \wedge v_{k_0} = 123$$
$$\Rightarrow$$
$$k_0v_{k_0} = abc \mapsto 123$$

and

$$k_1 = def \ \wedge v_{k_1} = xyz \mapsto 456$$
$$\Rightarrow$$
$$k_1v_{k_1} = def \mapsto xyz \mapsto 456$$

and

$$k_2 = ghi \ \wedge v_{k_2} =< 7, 8, 9 >$$
$$\Rightarrow$$
$$k_2v_{k_2} = ghi \mapsto < 7, 8, 9 >$$

and

$$k_3 = k_0v_{k_0} \ \wedge v_{k_3} = v_{k_2}$$
$$\Rightarrow$$
$$k_3v_{k_3} =<< abc \mapsto 123 > \mapsto < 7, 8, 9 >>$$

then the following will return true

$$object?\,(KV) = true$$

$$object?\,(k_0v_{k_0}) \Rightarrow object?\,(abc \mapsto 123) = true$$
$$object?\,(k_1v_{k_1}) \Rightarrow object?\,(def \mapsto xyz \mapsto 456) = true$$
$$object?\,(k_2v_{k_2}) \Rightarrow object?\,(ghi \mapsto< 7, 8, 9 >) = true$$
$$object?\,(k_3v_{k_3}) \Rightarrow object?\,(<< abc \mapsto 123 > \mapsto < 7, 8, 9 >>) = true$$
$$object?\,(v_{k_1}) \Rightarrow object?\,(xyz \mapsto 456) = true$$
$$object?\,(k_3) \Rightarrow object?\,(abc \mapsto 123) = true$$

and the following return false

$$object?\,(k_0) \Rightarrow object?\,(abc) = false$$
$$object?\,(k_1) \Rightarrow object?\,(def) = false$$
$$object?\,(v_{k_0}) \Rightarrow object?\,(123) = false$$
$$object?\,(v_{k_2}) \Rightarrow object?\,(< 7, 8, 9 >) = false$$