

Homework #4

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Consider the following F1WAE

$d ::=$	$\{\text{def fun } \{x\} \ e\}$	function definition	$d \in$	FunDef
$e ::=$	n	number	$e \in$	F1WAE
	$\{+ \ e \ e\}$	addition	$n \in$	\mathbb{Z}
	$\{\text{with } \{x \ e\} \ e\}$	identifier introduction	$x \in$	Var
	x	identifier	$\sigma \in$	$Var \xrightarrow{\text{fin}} \mathbb{Z}$
	$\{x \ e\}$	function application	$\Lambda \in$	$Var \xrightarrow{\text{fin}} \mathbf{FunDef}$

Write the operational semantics of the form $\sigma, \Lambda \vdash e \Rightarrow n$.

$\sigma \vdash e \Rightarrow v$

$n \Rightarrow v$