

4.1

$$Z1: \text{Register } 8 = \text{Reg } 0 + 0 = 0$$

$$Z2: \text{Register } 8 = \text{Reg } 0 + 1 = 1$$

$$Z3: \text{Register } 8 = \text{Reg } 0 \text{ OR } 0xffff$$

$$\begin{array}{r} \text{Reg } 0 : \quad 00000000 \\ \quad \text{OR} \quad 0000ffff \\ \hline \end{array}$$

$$\text{Reg } 8 : \quad 0x0000ffff$$

$$Z4: \text{Register } 9 = \text{Reg } 0 + -16384$$

$$-16384_{10} = ?_{16}$$

$$16384 : 16 = 1024 \text{ R } 0$$

$$1024 : 16 = 64 \text{ R } 0 \Rightarrow 4000_{16}$$

$$64 : 16 = 4 \text{ R } 0$$

$$4 : 16 = 0 \text{ R } 4$$

$$\begin{array}{r} 00000000 \\ -11114000 \\ \hline 0x fffffc000 \end{array}$$

$$\text{Register } 9 = 0xfffffc000$$

$$Z5: \text{Reg } 8 = \text{Reg } 8 + \text{Reg } 9$$

$$\Rightarrow 0x0000ffff + 0xfffffc000$$

$$0000ffff$$

$$+ fffffc000$$

$$\begin{array}{r} \text{Reg } 8 : 0x \quad 0000 \quad bfff \\ \hline \end{array}$$