

Instruction class	MIPS examples	HLL correspondence	Frequency	
			Integer	Ft. pt.
Arithmetic	add, sub, addi	Operations in assignment statements	16%	48%
Data transfer	lw, sw, lb, lbu, lh, lhu, sb, lui	References to data structures, such as arrays	35%	36%
Logical	and, or, nor, andi, ori, sll, srl	Operations in assignment statements	12%	4%
Conditional branch	beq, bne, slt, slti, sltiu	<i>If</i> statements and loops	34%	8%
Jump	j, jr, jal	Procedure calls, <i>r</i> eturns, and <i>c</i> ase/ <i>s</i> witch statements	2%	0%

FIGURE 2.48 MIPS instruction classes, examples, correspondence to high-level program language constructs, and percentage of MIPS instructions executed by category for the average integer and floating point SPEC CPU2006 benchmarks. Figure 3.24 in Chapter 3 shows average percentage of the individual MIPS instructions executed.