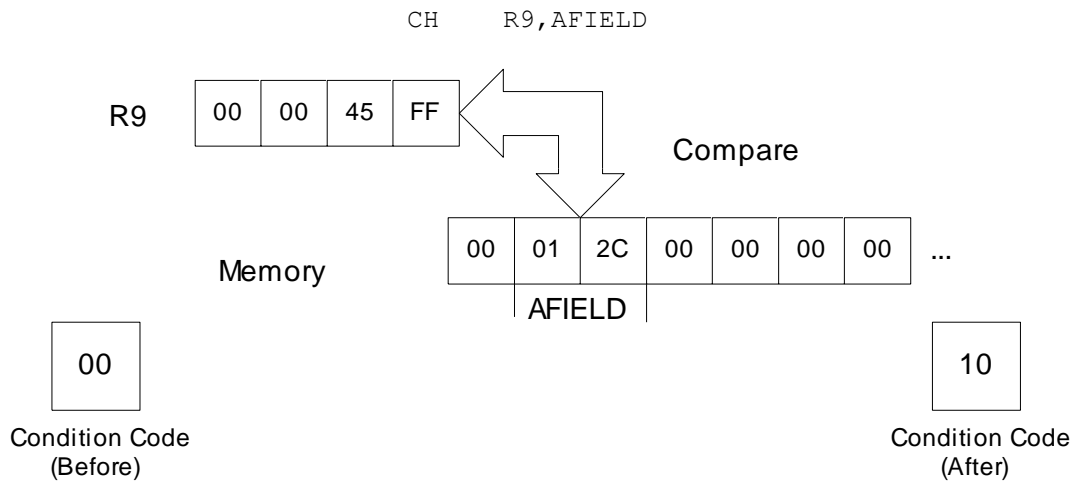


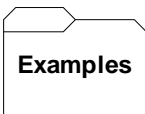
The Compare Halfword instruction is used to compare a binary fullword in a register, Operand 1, with a binary halfword in memory, Operand 2. The operands are compared as 2's complement signed binary integers. For purposes of comparison, the halfword is "sign-extended" to a fullword before the comparison occurs. This extension occurs internally and is temporary. The instruction sets the condition code to indicate how Operand 1 compares to Operand 2:

Condition Code	Meaning	Test With
0	Operand 1 = Operand 2	BE, BZ
1	Operand 1 < Operand 2	BL, BM
2	Operand 1 > Operand 2	BH, BP



The contents of the halfword "AFIELD", x012C', is signed extended to a fullword, x'0000012C', and is compared to the contents of register 9 which contains x'000045FF'. Since the contents of the register (Operand 1) is greater than the value than the extended halfword (Operand 2), the condition code is set to "High". The condition code in the diagram above is specified using 2 binary digits. After comparison, the condition code is set to a binary 10 which is 2 in decimal - a "High" condition.

Since **CH** is an RX instruction, an index register may be coded as part of operand 2 (see **Explicit Addressing**).



Some Unrelated Compare Halfwords

R4 = X'FFFFFFD5' -43 IN 2'S COMPLEMENT
R5 = X'00000028' +40 IN 2'S COMPLEMENT
R6 = X'00000004' +4 IN 2'S COMPLEMENT

DOG DC H'40'
CAT DC H'-30'
PIG DC H'14'
GOAT DC H'3'

CH R4,=H'20' CONDITION CODE = LOW
CH R4,=H'-50' CONDITION CODE = HIGH
CH R5,=H'20' CONDITION CODE = HIGH
CH R6,=H'4' CONDITION CODE = EQUAL
CH R5,=H'40' CONDITION CODE = EQUAL
CH R5,DOG CONDITION CODE = EQUAL
CH R6,DOG(R6) CONDITION CODE = LOW
DOG(R6) IS EQUIVALENT TO PIG