

Fred Morrison  
CSC-366

Function:  $\text{hex}(f) = (0.5 / \# \text{ predicates}) + (0.5 / (1 + \# \text{ defined expressions}))$

**H1** - if  $\text{sameP}(A,B) \wedge \text{zeroP}(C,D,E) \wedge \text{oneP}(G)$  then  $((A / B) + \text{zeroX}(C,D,E))$   
 $\text{hex}(\text{H1}) = (0.5 / 3) + (0.5 / (1 + 1)) \rightarrow .417$

**H2** - if  $\text{sameP}(A,B)$  and  $\text{goalP}(C,D,E)$  then  $((A - B) + \text{goalX}(C,D,E))$   
 $\text{hex}(\text{H2}) = (0.5 / 2) + (0.5 / (1 + 1)) \rightarrow .50$

**H3** - if  $\text{zeroP}(A)$  and  $\text{goalP}(B)$  and  $\text{numbersP}(C,D,E)$  then  $(B + (A * (C * (D * E))))$   
 $\text{hex}(\text{H3}) = (0.5 / 3) + (0.5 / (1 + 0)) \rightarrow .667$

**H4** - if  $\text{sameP}(A,B)$  and  $\text{goalP}(C)$  and  $\text{numbersP}(D,E)$  then  $(C + ((A - B) * (D * E)))$   
 $\text{hex}(\text{H4}) = (0.5 / 3) + (0.5 / (1 + 0)) \rightarrow .667$

**H5** - if  $\text{oneP}(A)$  and  $\text{zeroP}(B,C,D)$  and  $\text{onemoreP}(E,G)$  then  $((E - A) + \text{zeroX}(C,D,E))$   
 $\text{hex}(\text{H5}) = (0.5 / 3) + (0.5 / (1 + 1)) \rightarrow .417$

**H6** - if  $\text{oneP}(A)$  and  $\text{oneP}(B)$  and  $\text{zeroP}(C,D)$  and  $\text{twomoreP}(E,G)$  then  $((E - (A + B)) + \text{zeroX}(C,D))$   
 $\text{hex}(\text{H6}) = (0.5 / 4) + (0.5 / (1 + 1)) \rightarrow .375$

**H7** - if  $\text{sameP}(A,B)$  and  $\text{sameP}(C,D)$  and  $\text{twomoreP}(E,G)$   
then  $(E - ((A / B) + (C / D)))$   
 $\text{hex}(\text{H7}) = (0.5 / 3) + (0.5 / (1 + 0)) \rightarrow .667$

**H8** - if  $\text{twoP}(A,B)$  and  $\text{zeropP}(C,D)$  and  $\text{twomoreP}(E,G)$   
then  $((E - \text{twoX}(A,B)) + \text{zeroX}(C,D))$   
 $\text{hex}(\text{H8}) = (0.5 / 3) + (0.5 / (1 + 2)) \rightarrow .333$

**H9** - if  $\text{sameP}(A,B,C,D,E,G)$  then  $(A + ((B - C) + (D - E)))$   
 $\text{hex}(\text{H9}) = (0.5 / 1) + (0.5 / (1 + 0)) \rightarrow 1$