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IS 733 01
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entropy for temperature

	Y	N	
hot	2	2	entropy = 1
mild	4	2	entropy = -(.66log2.66+.33log2.33) = .92
cool	3	1	entropy = -(.75log2(.75)+.25log2(.25) = .81

entropy(temperature) = 4/14*1+6/14*.92+4/14*81=.91
IG(S,temperature) = E(S)-E(temperature) = 0.94-0.91=0.03

entropy for humidity

	Y	N	
high	3	4	entropy=-(3/7log2(3/7)+4/7log2(4/7)=0.98
normal	6	1	entropy=-(6/7log2(6/7)+1/7log2(1/7)=0.59

entropy(humidity)= 1/2*.98+1/2*.59 = .78
IG(S,humidity)=E(S)-E(humidity)=0.94-0.78=0.16

entropy for windy

	Y	N	
TRUE	3	3	entropy = 1
FALSE	6	2	entropy = -(6/8log2(6/8)+2/8log2(2/8) = 0.81

entropy(windy) = 6/14*1+8/14*.81=0.89
IG(S,windy)=E(S)-E(windy)=.94-.89=.05