You are preparing a weather report form, WS Form B-80. The dry bulb thermometer reads 30°F (-1°C), and the wet bulb thermometer reads 28°F (-2°C). Using the Ships Code Card, how would you encode the air temperature groups in the report?

Note: The answers below have two values. The first value corresponds to section 1snTTT(air temperature) and the second value corresponds to 2snTdTdTd(dew point temperature) of WS Form B-80. Encoding requires converting degrees Fahrenheit to degrees Celsius.

A.10011, 2003/
Incorrect. The second digit of 10011 must be a 1 since the value of the dry bulb temperature in Celsius is negative.

B.11300, 2124/
Incorrect. The third digit of 11300 must be a 0 since you need to include preceding zeroes for % Celsius.

C.11011, 2124/
Incorrect. The third digit of 2124/ must be a 0 since you need to include preceding zeroes for -4.0° Celsius.

D.11011, 2104/
Correct. The value 11011 is encoded and entered into section 1snTTT: The first digit 1, is the default value to indicate "dry bulb". The second value represented by sn = 1, since the dry bulb temperature in degrees Celsius is negative (-). The third, fourth, and fifth values TTT = 011, correspond to dry bulb temperature in degrees Celsius. Convert 30° F to Celsius, which is -1.1° C and include the preceding zero value. The proper entry for the first value therefore is 11011.

The second value is encoded and entered into section 2snTdTdTd. The first digit 2 is the default value to represent "wet bulb". The second digit represented by sn=1, since the value in degrees Celsius is negative(-). TdTdTd is derived from the wet bulb depression (difference between the dry and wet bulb temperatures). From the last page of the Ships' Code Card, "dew point calculation table", determine the coded value. This can be determined by using the wet bulb depression value of 1.0° C, which is determined by subtracting -2°C [wb] from -1°C [db] to yield +1° C: (-1°C – (-2°C) = +1° C) and the wet bulb temperature -2° C. The value -4 is where these two values intersect. TdTdTd reads 04, where the slash (/) indicates that tenths of the dew point temperature is not available. Therefore, the proper entry for the second value is 2104/.

See Diagram on Next Page

WB FORM B 80 (10 85)
PRES. BY WMO DIRECTIVES

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

WEATHER REPORT FOR IMMEDIATE TRANSMISSION

NO.	SHIP NAME	DATE SENT (GMT)	TIME SENT (GMT)	STA. CALLED	FREQUENCY

ADDRESSES

U.S. Coast Guard: No address needed, start with ship's call sign.

INMARSAT: Select — Coast Earth Station (CES), routine priority, duplex telex channel, and initiate call. When GA + is received, select 41 +. Upon receipt of answerback, NWS OBS MIITS, send the weather report starting with the ship's call sign. End the report with 5 periods.

U.S. commercial and foreign radio stations: To: OBS METEO _____ (get address from "Radio Stations Accepting......"). Start with ship's call sign and combine the remaining numbers into 10-character groups.

STORM or SPREP	CALL SIGN	$YYGGi_w$	$99L_aL_aL_a$	$Q_cL_oL_oL_oL_o$	i_Ri_xhVV	$Nddff$
			99		4	
$1s_nTTT$	$2s_nT_dT_dT_d$	$4PPPP$	$5appp$	$7wwW_1W_2$	$8N_hC_LC_MC_H$	$222D_sv_s$
$0s_nT_wT_wT_w$	$2P_wP_wH_wH_w$	$3d_{w1}d_{w1}d_{w2}d_{w2}$	$4P_{w1}P_{w1}H_{w1}H_{w1}$	$5P_{w2}P_{w2}H_{w2}H_{w2}$	$6I_sE_sE_sR_s$	ICE
$c_iS_ib_iD_iz_i$	PLAIN LANGUAGE					
			TRANSMITTED BY			

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