

Find the sum of the interior angles shown below. (5 pts. each)

Determine the "error of angular closure" and record it in the space provided.

Note: error of closure = measured sum – design sum (5 pts. each)

Polygon #1

$$\begin{array}{r} 83^{\circ} 23' 00'' \\ 105^{\circ} 27' 00'' \\ 158^{\circ} 31' 00'' \\ 53^{\circ} 19' 00'' \\ \hline 138^{\circ} 18' 00'' \\ \hline \mathbf{538^{\circ} 58' 00''} \\ (-540^{\circ} 00' 00'') \end{array}$$

error = $-1^{\circ} 02' 00''$

Polygon #2

$$\begin{array}{r} 96^{\circ} 34' 00'' \\ 111^{\circ} 42' 00'' \\ 183^{\circ} 12' 00'' \\ 88^{\circ} 57' 00'' \\ 139^{\circ} 21' 00'' \\ \hline 100^{\circ} 18' 00'' \\ \hline \mathbf{720^{\circ} 04' 00''} \\ (-720^{\circ} 00' 00'') \end{array}$$

error = $+0^{\circ} 04' 00''$

Polygon #3

$$\begin{array}{r} 89^{\circ} 53' 49'' \\ 113^{\circ} 25' 25'' \\ 228^{\circ} 31' 09'' \\ 63^{\circ} 16' 21'' \\ 108^{\circ} 08' 08'' \\ 219^{\circ} 52' 14'' \\ 79^{\circ} 43' 29'' \\ \hline 177^{\circ} 14' 26'' \\ \hline \mathbf{1080^{\circ} 05' 01''} \\ (-1080^{\circ} 00' 00'') \end{array}$$

error = $+0^{\circ} 05' 01''$

Polygon #4

$$\begin{array}{r} 90^{\circ} 04' 58'' \\ 111^{\circ} 42' 00'' \\ 129^{\circ} 42' 18'' \\ 81^{\circ} 37' 22'' \\ 151^{\circ} 51' 46'' \\ 100^{\circ} 48' 03'' \\ \hline 234^{\circ} 11' 30'' \\ \hline \mathbf{899^{\circ} 57' 57''} \\ (-900^{\circ} 00' 00'') \end{array}$$

error = $-0^{\circ} 02' 03''$

Polygon #5

$$\begin{array}{r} 94^{\circ} 23' 47'' \\ 127^{\circ} 27' 41'' \\ 238^{\circ} 01' 48'' \\ 83^{\circ} 39' 08'' \\ 179^{\circ} 28' 24'' \\ 101^{\circ} 44' 20'' \\ 74^{\circ} 28' 58'' \\ 144^{\circ} 49' 06'' \\ 215^{\circ} 19' 20'' \\ 155^{\circ} 27' 00'' \\ 77^{\circ} 55' 33'' \\ 158^{\circ} 30' 20'' \\ \hline 328^{\circ} 49' 09'' \\ \hline \mathbf{1980^{\circ} 04' 34''} \\ (-1980^{\circ} 00' 00'') \end{array}$$

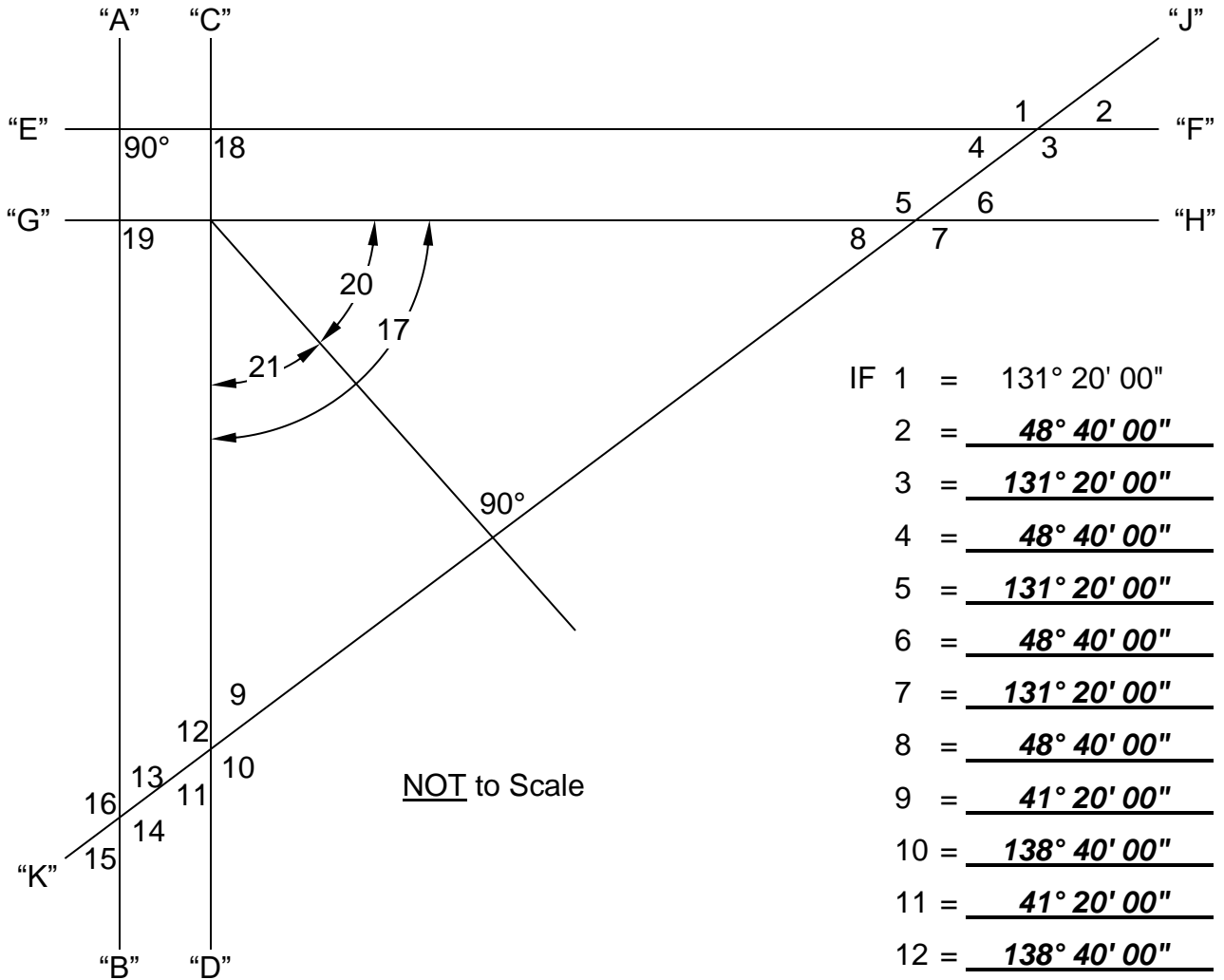
error = $+0^{\circ} 04' 34''$

Polygon #6

$$\begin{array}{r} 103^{\circ} 34' 19'' \\ 211^{\circ} 42' 57'' \\ 143^{\circ} 12' 39'' \\ 68^{\circ} 55' 28'' \\ 199^{\circ} 40' 41'' \\ 101^{\circ} 18' 45'' \\ 125^{\circ} 50' 47'' \\ 126^{\circ} 27' 08'' \\ 179^{\circ} 59' 49'' \\ 89^{\circ} 50' 44'' \\ 145^{\circ} 00' 54'' \\ 196^{\circ} 28' 28'' \\ 267^{\circ} 05' 35'' \\ \hline 200^{\circ} 59' 58'' \\ \hline \mathbf{2160^{\circ} 08' 12''} \\ (-2160^{\circ} 00' 00'') \end{array}$$

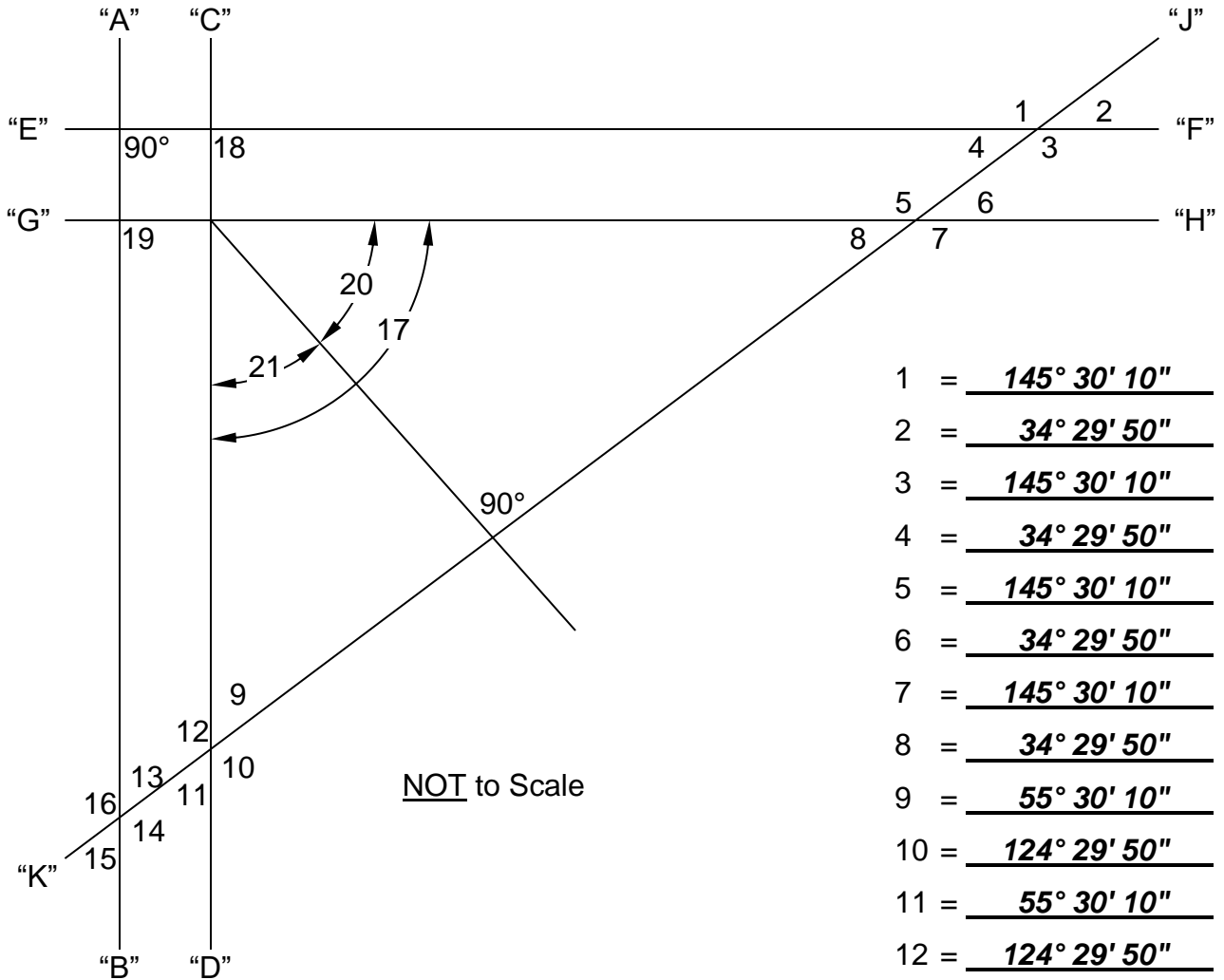
error = $+0^{\circ} 08' 12''$

Lines A-B and C-D are parallel.
Lines E-F and G-H are parallel.



- IF 1 = $131^\circ 20' 00''$
- 2 = $48^\circ 40' 00''$
- 3 = $131^\circ 20' 00''$
- 4 = $48^\circ 40' 00''$
- 5 = $131^\circ 20' 00''$
- 6 = $48^\circ 40' 00''$
- 7 = $131^\circ 20' 00''$
- 8 = $48^\circ 40' 00''$
- 9 = $41^\circ 20' 00''$
- 10 = $138^\circ 40' 00''$
- 11 = $41^\circ 20' 00''$
- 12 = $138^\circ 40' 00''$
- 13 = $41^\circ 20' 00''$
- 14 = $138^\circ 40' 00''$
- 15 = $41^\circ 20' 00''$
- 16 = $138^\circ 40' 00''$
- 17 = $90^\circ 00' 00''$
- 18 = $90^\circ 00' 00''$
- 19 = $90^\circ 00' 00''$
- 20 = $41^\circ 20' 00''$
- 21 = $48^\circ 40' 00''$

Lines A-B and C-D are parallel.
Lines E-F and G-H are parallel.



- 1 = 145° 30' 10"
- 2 = 34° 29' 50"
- 3 = 145° 30' 10"
- 4 = 34° 29' 50"
- 5 = 145° 30' 10"
- 6 = 34° 29' 50"
- 7 = 145° 30' 10"
- 8 = 34° 29' 50"
- 9 = 55° 30' 10"
- 10 = 124° 29' 50"
- 11 = 55° 30' 10"
- 12 = 124° 29' 50"
- 13 = 55° 30' 10"
- 14 = 124° 29' 50"
- IF 15 = 55° 30' 10"
- 16 = 124° 29' 50"
- 17 = 90° 00' 00"
- 18 = 90° 00' 00"
- 19 = 90° 00' 00"
- 20 = 55° 30' 10"
- 21 = 34° 29' 50"