

**Key**

Given:

$$\begin{aligned}\Delta &= 100^{\circ}00'00'' \\ R &= 275.00' \\ PC &= 1+25.00\end{aligned}$$

Find:

Tangent distances and tangent offsets to layout this curve on full stations.  
Additionally, calculate deflection angles and sub-chords to check.

$$\begin{aligned}(1) \quad \Delta &= 100^{\circ}00'00'' \\ (2) \quad R &= 275.00' \\ (3) \quad L &= \underline{479.97'} \\ (4) \quad C &= \underline{421.32'} \\ (5) \quad T &= \underline{327.73'} \\ (6) \quad M &= \underline{98.23'} \\ (7) \quad E &= \underline{152.82'} \\ (8) \quad D_A &= \underline{20^{\circ}50'05''} \\ (9) \quad D_C &= \underline{20^{\circ}57'05''} \\ (10) \quad df &= \underline{0.1042^{\circ}}\end{aligned}$$

STATION	$l$	$\alpha$	TD	TO	$\alpha/2$	SC
1+25.00	-0-	-0-	-0-	-0-	-0-	-0-
2+00	<b>75.00'</b>	<b>15°37'34"</b>	<b>74.07'</b>	<b>10.16'</b>	<b>7°48'47"</b>	<b>74.77'</b>
3+00	<b>175.00'</b>	<b>36°27'39"</b>	<b>163.43'</b>	<b>53.83'</b>	<b>18°13'50"</b>	<b>172.06'</b>
4+00	<b>275.00'</b>	<b>57°17'45"</b>	<b>231.40'</b>	<b>126.42'</b>	<b>28°38'52"</b>	<b>263.68'</b>
5+00	<b>375.00'</b>	<b>78°07'50"</b>	<b>269.12'</b>	<b>218.44'</b>	<b>39°03'55"</b>	<b>346.61'</b>
6+00	<b>475.00'</b>	<b>98°57'56"</b>	<b>271.64'</b>	<b>317.86'</b>	<b>49°28'58"</b>	<b>418.12'</b>
<b>6+04.97</b>	<b>479.97'</b>	<b>100°00'03"</b>	<b>270.82'</b>	<b>322.76'</b>	<b>50°00'02"</b>	<b>421.33'</b>