## Functions of 12' - 6" Arc for different radii



## **Convex and Concave Curved Guardrail Panels**

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Rail sections to be installed on curves having a radius of 5 feet to 150 feet can be curved in our fabricating facilities prior to delivery. Rail can be curved either convex or concave as required. Terms "convex" or "concave" refer to the direction curved, inward or outward, relative to the traffic face of the rail.

## To find the Radius for a curved rail:

- 1. Starting at the last post in the straight run (Point A), lay a cloth tape along the path that the curved guide rail will follow.
- 2. Mark-off two points along the curved cloth tape: one at 6'-3", (Point B) and the second at 12'-6" (Point C)
- 3. Pull strong directly from starting point (Point A) to the second mark-off point (Point C).
- 4. Measure from the first mark-off point (Point B) over to the mid-point of the taut string. This measurement (D) is the rise.
- 5. Check the chart to find the radius (R), given the rise (D). Example: A rise of 3-7/8" would result in a radius of 60 feet.

**Note:** Follow the steps above for each piece of rail section in the curved run. The arc may not be consistent and each consecutive piece of rail may differ in radius from the previous one.

Functions of 12-ft., 6-in. arc for different radii.

<u>Radii (R)</u>	Angle (A)	<u>Chord (C)</u>	<u>Rise (R)</u>
5	143º 14	9'-5 7/8"	3'-5"
10	71º 37'	11'-8 3/8''	1'-10 3/4"
15	47º 45'	12'-1 3/4''	1'-3 3/8"
20	35° 49'	12'-3 5/8''	11 5/8"
25	28º 39'	12'-4 1/2"	9 3/8"
30	23º 52'	12'-4 7/8''	7 3/4"
35	20º 28'	12'-5 1/8''	6 5/8''
40	17º 53'	12'-5 3/8''	5 7/8"
45	15º 55'	12'-5 1/2''	5 1/4"
50	14º 19'	12'-5 5/8''	4 5/8"
55	13º 01'	12'-5 5/8''	4 1/4"
60	11º 56'	12'-5 3/4''	3 7/8"
65	11º 01'	12'-5 3/4''	3 5/8"
70	10º 14'	12'-5 3/4''	3 3/8"
75	9º 33'	12'-5 3/4''	3 1/8"
80	8º 57'	12'-5 7/8''	3"
85	8º 26'	12'-5 7/8''	2 3/4"
90	7º 58'	12'-5 7/8''	2 5/8''
95	7º 32'	12'-5 7/8''	2 1/2"
100	7º 10'	12'-5 7/8''	2 3/8"
110	6º 31'	12'-5 7/8''	2 1/8"
120	5° 58'	12'-6"	2"
130	5º 31'	12'-6"	1 3/4"
140	5° 07'	12'-6"	1 5/8"
150	4º 47'	12'-6"	1 1/2"

