1. Given the curve as shown...

Find elevations for full and half stations:


| STATION | X | TANGENT <br> ELEVATION | OFFSET | CURVE <br> ELEVATION | FIRST <br> DIFFERENCE | SECOND <br> DIFFERENCE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $25+50$ | 0.00 | 429.30 | 0.00 | 429.30 | 1.03 | -0.17 |
| $26+00$ | 0.50 | 430.42 | -0.09 | 430.33 | 0.86 | -0.17 |
| $26+50$ | 1.00 | 431.53 | -0.34 | 431.19 | 0.69 | -0.17 |
| $27+00$ | 1.50 | 432.65 | -0.77 | 431.88 | 0.52 | -0.17 |
| $27+50$ | 2.00 | 433.77 | -1.37 | 432.40 | 0.35 | -0.17 |
| $28+00$ | 2.50 | 434.88 | -2.14 | 432.74 | 0.18 | -0.17 |
| $28+50$ | 3.00 | 436.00 | -3.08 | 432.92 | 0.00 | -0.17 |
| $29+00$ | 3.50 | 437.12 | -4.19 | 432.92 | -0.17 | -0.17 |
| $29+50$ | 4.00 | 438.23 | -5.48 | 432.76 | -0.34 | -0.17 |
| $30+00$ | 4.50 | 439.35 | -6.93 | 432.42 | -0.51 | -0.17 |
| $30+50$ | 5.00 | 440.47 | -8.56 | 431.91 | -0.68 | -0.17 |
| $31+00$ | 5.50 | 441.59 | -10.36 | 431.23 | -0.85 |  |
| $31+50$ | 6.00 | 442.70 | -12.33 | 430.38 |  |  |
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2. Given the curve as shown...

Find elevations for full and half stations:


| STATION | X | TANGENT <br> ELEVATION | OFFSET | CURVE <br> ELEVATION | FIRST <br> DIFFERENCE | SECOND <br> DIFFERENCE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $41+00$ | 0.0000 | 528.87 | 0.00 | 528.87 | -1.64 | 0.18 |
| $41+50$ | 0.5000 | 527.13 | 0.09 | 527.22 | -1.47 | 0.18 |
| $42+00$ | 1.0000 | 525.40 | 0.36 | 525.76 | -1.29 | 0.18 |
| $42+50$ | 1.5000 | 523.67 | 0.80 | 524.47 | -1.11 | 0.18 |
| $43+00$ | 2.0000 | 521.93 | 1.43 | 523.36 | -0.93 | 0.18 |
| $43+50$ | 2.5000 | 520.20 | 2.23 | 522.43 | -0.75 | 0.18 |
| $44+00$ | 3.0000 | 518.47 | 3.22 | 521.68 | -0.57 | 0.18 |
| $44+50$ | 3.5000 | 516.73 | 4.38 | 521.11 | -0.39 | 0.18 |
| $45+00$ | 4.0000 | 515.00 | 5.72 | 520.72 | -0.21 | 0.18 |
| $45+50$ | 4.5000 | 513.27 | 7.24 | 520.50 | -0.04 | 0.18 |
| $46+00$ | 5.0000 | 511.53 | 8.93 | 520.47 | 0.14 | 0.18 |
| $46+50$ | 5.5000 | 509.80 | 10.81 | 520.61 | 0.32 | 0.18 |
| $47+00$ | 6.0000 | 508.07 | 12.86 | 520.93 | 0.50 | 0.18 |
| $47+50$ | 6.5000 | 506.33 | 15.10 | 521.43 | 0.68 | 0.18 |
| $48+00$ | 7.0000 | 504.60 | 17.51 | 522.11 | 0.86 | 0.18 |
| $48+50$ | 7.5000 | 502.87 | 20.10 | 522.96 | 1.04 |  |
| $49+00$ | 8.0000 | 501.13 | 22.87 | 524.00 |  |  |
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3. Given the curve as shown...

Find elevations for full and half stations:
(Include station at midpoint of curve.)
PVI EL = 319.27'

$\mathrm{L}=850.00^{\prime}$

| STATION | x | TANGENT <br> ELEVATION | OFFSET | CURVE <br> ELEVATION | FIRST <br> DIFFERENCE | SECOND <br> DIFFERENCE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $13+12.87$ | 0.0000 | 315.23 | 0.00 | 315.23 | 0.33 | 0.06 |
| $13+50$ | 0.3713 | 315.59 | -0.02 | 315.57 | 0.39 | -0.07 |
| $14+00$ | 0.8713 | 316.06 | -0.10 | 315.96 | 0.33 | -0.07 |
| $14+50$ | 1.3713 | 316.54 | -0.25 | 316.29 | 0.26 | -0.07 |
| $15+00$ | 1.8713 | 317.01 | -0.46 | 316.55 | 0.20 | -0.07 |
| $15+50$ | 2.3713 | 317.49 | -0.73 | 316.75 | 0.13 | -0.07 |
| $16+00$ | 2.8713 | 317.96 | -1.08 | 316.88 | 0.07 | -0.07 |
| $16+50$ | 3.3713 | 318.44 | -1.48 | 316.95 | 0.00 | -0.04 |
| $17+00$ | 3.8713 | 318.91 | -1.96 | 316.95 | -0.04 | 0.02 |
| $17+37.87$ | 4.2500 | 319.27 | -2.36 | 316.91 | -0.02 | -0.11 |
| $17+50$ | 4.3713 | 319.39 | -2.50 | 316.89 | -0.13 | -0.07 |
| $18+00$ | 4.8713 | 319.86 | -3.10 | 316.76 | -0.19 | -0.07 |
| $18+50$ | 5.3713 | 320.34 | -3.77 | 316.57 | -0.26 | -0.07 |
| $19+00$ | 5.8713 | 320.81 | -4.50 | 316.31 | -0.32 | -0.07 |
| $19+50$ | 6.3713 | 321.29 | -5.30 | 315.98 | -0.39 | -0.07 |
| $20+00$ | 6.8713 | 321.76 | -6.17 | 315.59 | -0.45 | -0.07 |
| $20+50$ | 7.3713 | 322.24 | -7.10 | 315.14 | -0.52 | -0.07 |
| $21+00$ | 7.8713 | 322.71 | -8.09 | 314.62 | -0.59 | 0.42 |
| $21+50$ | 8.3713 | 323.19 | -9.15 | 314.03 | -0.16 |  |
| $21+62.87$ | 8.5000 | 323.31 | -9.44 | 313.87 |  |  |

