



Design of Superelevation Formulas

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Examples!

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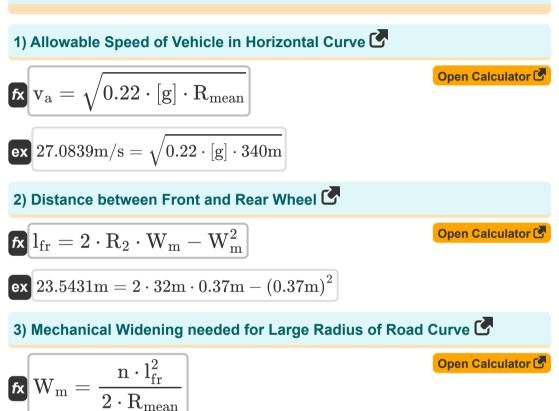
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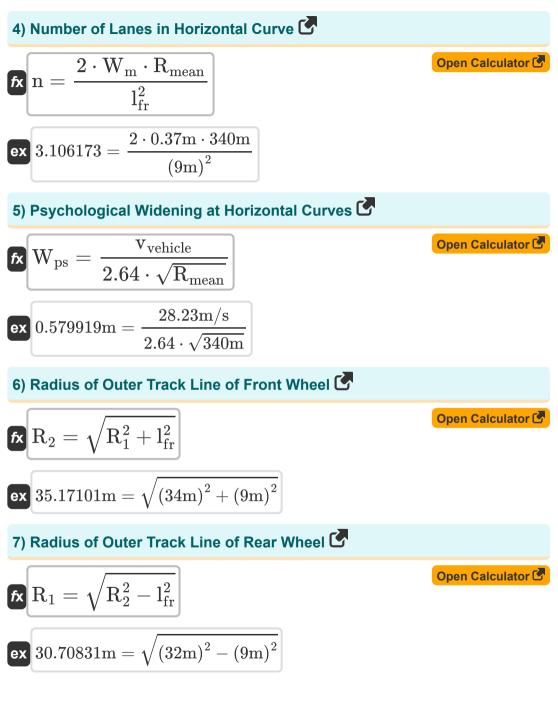
List of 12 Design of Superelevation Formulas

Design of Superelevation C



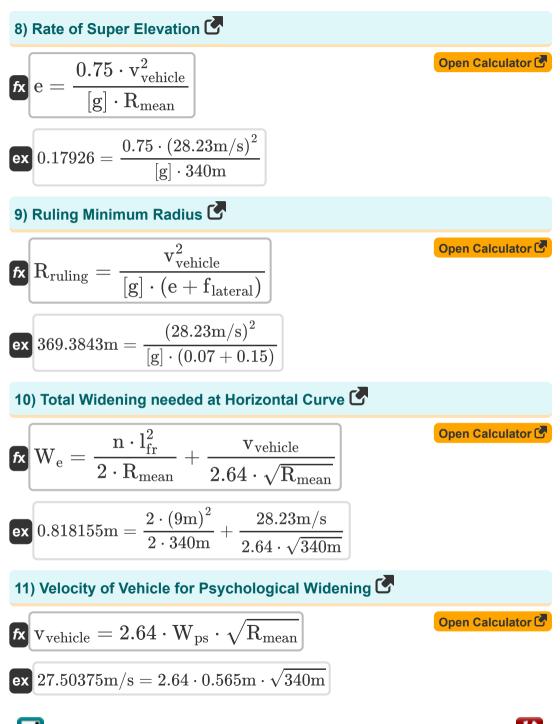
ex
$$0.238235 \text{m} = rac{2 \cdot (9 \text{m})^2}{2 \cdot 340 \text{m}}$$











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12) Velocity of Vehicle for Ruling Minimum Radius 子

fx
$$v_{vehicle} = \sqrt{R_{ruling} \cdot [g] \cdot (e + f_{lateral})}$$

ex $24.13535 \text{m/s} = \sqrt{270 \text{m} \cdot [g] \cdot (0.07 + 0.15)}$



Open Calculator 🕑

Variables Used

- **e** Rate of Super Elevation
- flateral Coefficient of Lateral Friction
- Ifr Distance between Front and Rear Wheel (Meter)
- **n** Number of Lanes
- R₁ Radius of Outer Track Line of Rear Wheel (Meter)
- R2 Radius of Outer Track Line of Front Wheel (Meter)
- Rmean Mean Radius of Curve (Meter)
- Rruling Ruling Minimum Radius (Meter)
- Va Allowable Speed (Meter per Second)
- Vvehicle Velocity (Meter per Second)
- We Total Widening Needed at Horizontal Curve (Meter)
- W_m Mechanical Widening on Horizontal Curves (Meter)
- Wps Psychological Widening at Horizontal Curves (Meter)

Constants, Functions, Measurements used

- Constant: [g], 9.80665 Meter/Second² Gravitational acceleration on Earth
- Function: **sqrt**, sqrt(Number) Square root function
- Measurement: Length in Meter (m) Length Unit Conversion
- Measurement: Speed in Meter per Second (m/s)
 Speed Unit Conversion



Check other formula lists

- Design of Superelevation
 Formulas
- Pavement Materials Formulas G

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