**Geradengleichung**

**Bestimmungsstücke:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Richtungsvektor |  | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |   Zusammenhang: |
| Normalenvektor |  |
| Steigung/Anstieg/ Richtungsfaktor  *m* |  |
| Richtungswinkel |  |

*Bemerkung:* Parallele Geraden *m*1=*m*2 Senkrechte Geraden: *m*1=

**Geradengleichung:**

*Bemerkung:* weitere Geradengleichungen 🡪 Formelsammlung! z. B:

* Gleichung der Geraden AB?
* Liegt der Punkt *P*(2; -1) auf der Geraden?
* Bestimme die fehlende Koordinate!
* Schnittpunkte mit den Achsen?
* x-Achse: y=0
* y-Achse: x=0

**Anwendungen:**

* Schnittpunkt zweier Geraden
* Abstand eines Punktes von einer Geraden: *e*: *Ax*+*By*+*C*=0; *P*(*x*1 ; *y*1), dann
* e: 2x+3y=28   
  P(4; -2)
* Berechnungen im Dreieck:
* Höhe zur AB
* Mittelsenkrechte von AB
* Seitenhalbierende aus C
* Seitengerade AB