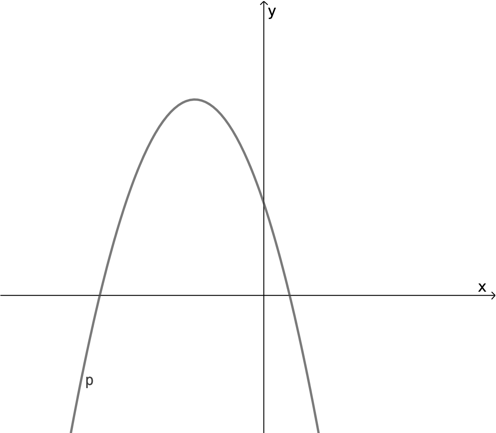
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|  | 1. Folgen Sie den Anweisungen im LearningSnack. 2. Ergänzen Sie hier die Schaubilder und Ihre Definition. |

Tangente

Definition:

Individuelle Schülerantwort, z.B.

Eine Gerade, die eine Parabel nur an einem Punkt berührt.



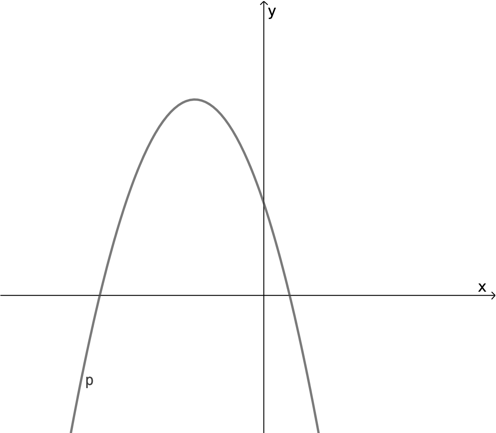
Sekante

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Definition:

Individuelle Schülerantwort, z.B.

Eine Gerade, die eine Parabel an zwei Punkten schneidet.



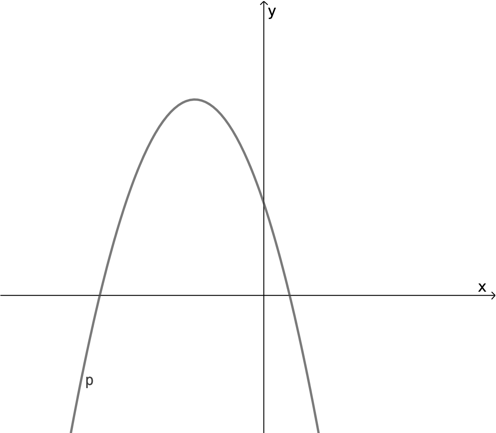
Passante

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Definition:

Individuelle Schülerantwort, z.B.

Eine Gerade, die keine gemeinsamen Punkte mit einer Parabel hat.



Lösungsbuchstabe: [](https://quizizz.com/join/lesson/5ff31425a5408d001b7720db/start) **Rechenaufgaben:**

R

1. Scannen Sie hierfür nacheinander die drei QR-Codes.

p: y = – x2 – 3x + 2 g: y= – x – 1

– x2 – 3x + 2 = – x – 1

– x2 – 2x + 3 = 0 a = – 1 b = – 2 c = 3

x1 = -3 x2 = 1

y1 = – (-3) – 1 = 2 y2 = – (1) – 1 = - 2

S1(-3|2) S2(1|-2)

🡪 Sekante

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| p: y = – x2 – 3x + 2 g: y= x + 6  – x2 – 3x + 2 = x + 6  – x2 – 4x – 4 = 0 a = – 1 b = – 4 c = – 4  x = -2  y1 = –2 + 6 = 4  S(–2|4)  🡪 Tangente |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  | p: y = – x2 – 3x + 2 g: y= –0,5x + 4,5  – x2 – 3x + 2 = –0,5x + 4,5  – x2 – 2,5x – 2,5 = 0 a = – 1 b = – 2,5 c = – 2,5  Keine Lösung    🡪 Passante |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**Zusammenfassung**

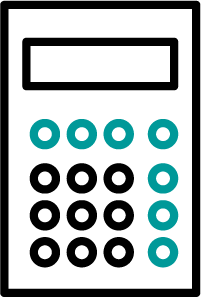
Diskriminante D = b2 – 4ac

D > 0 Zwei Schnittpunkte

D = 0 Ein gemeinsamer Punkt

D < 0 Keine gemeinsamen Punkte

Anzahl der gemeinsamen Punkte ist von der Diskriminante abhängig.



**[](https://www.geogebra.org/m/edrnztvk)**

**Übungen** für schnelle Rechner:

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| --- | --- | --- | --- |
| Anzahl der Lösungen | Zwei Schnitt-punkte | Ein Schnitt-punkt | Keine Schnitt-punkte |
| Anzahl der richtigen Rechnungen |  |  |  |