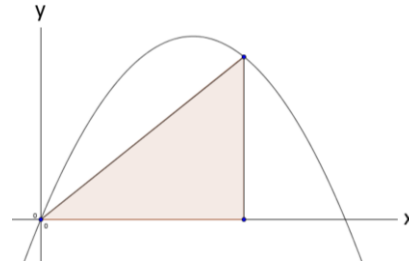


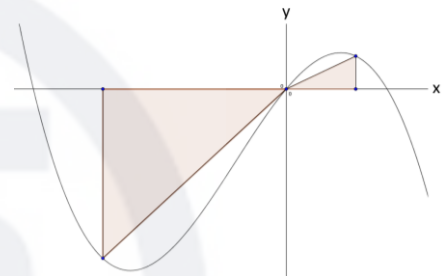
Differentialrechnung [Maximaler Flächeninhalt]

An welcher Stelle x ist der Flächeninhalt zur x -Achse am grössten? Wie gross sind die Flächen?

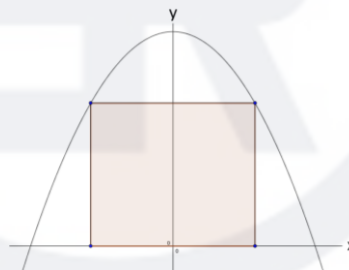
a) $y(x) = -2x^2 + 12x$



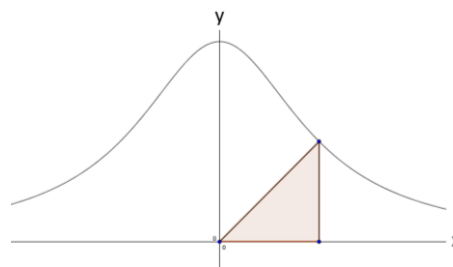
b) $y(x) = -3x^3 - 18x^2 + 120x$



c) $y(x) = -x^2 + 9$



d) $y(x) = \frac{32}{x^2+4}$



Lösungen:

- | | | |
|----|-------------|---------------|
| a) | $x = 4$ | $A = 32$ |
| b) | $x = -7.26$ | $A = 2439.23$ |
| c) | $x = 1.73$ | $A = 10.4$ |
| d) | $x = 2$ | $A = 4$ |

