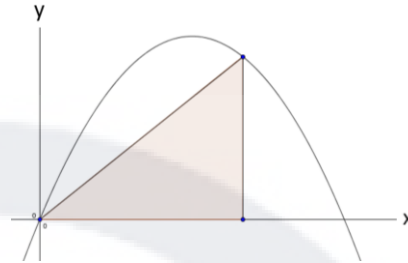


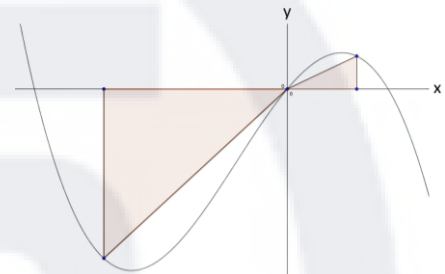
Differentialrechnung [Maximaler Flächeninhalt]

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

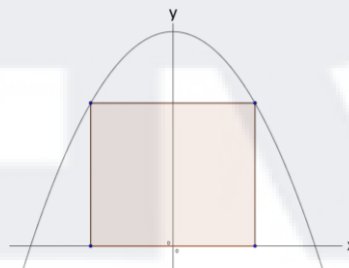
a) $y(x) = -2x^2 + 12x$



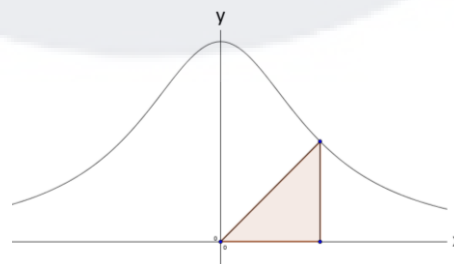
b) $y(x) = -3x^3 - 18x^2 + 120x$



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) $x = 2$ $A = 4$