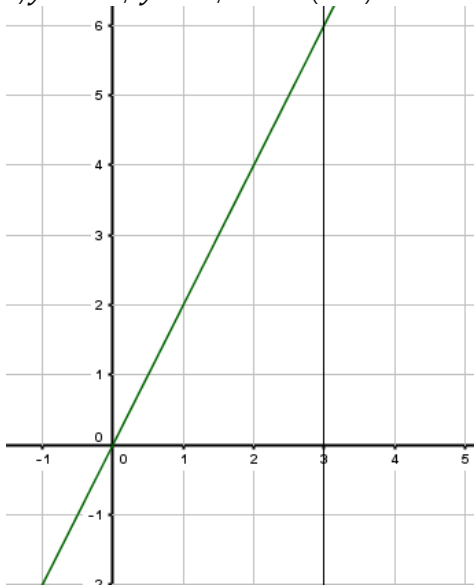


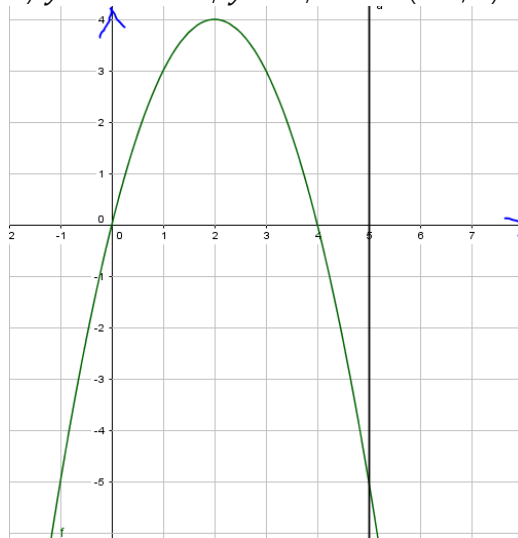
PINDALA ARVUTAMINE MÄÄRATUD INTEGRAALI ABIL

I Leida antud joontega piiratud kujundi [pindala](#)

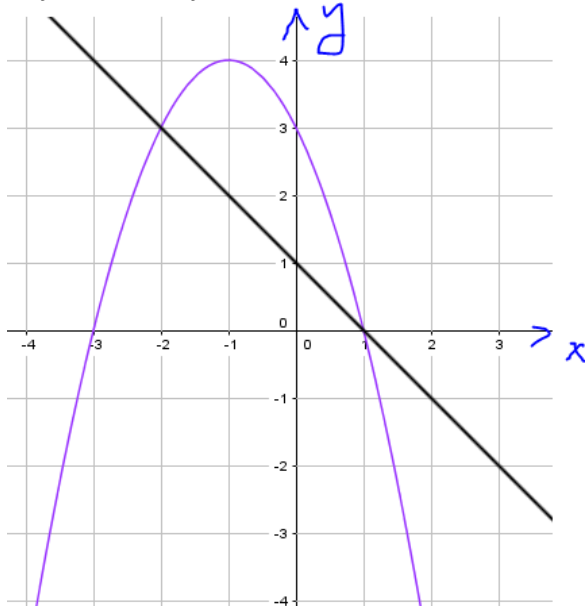
1) $y = 2x; y = 0; x = 3$ (v: 9)



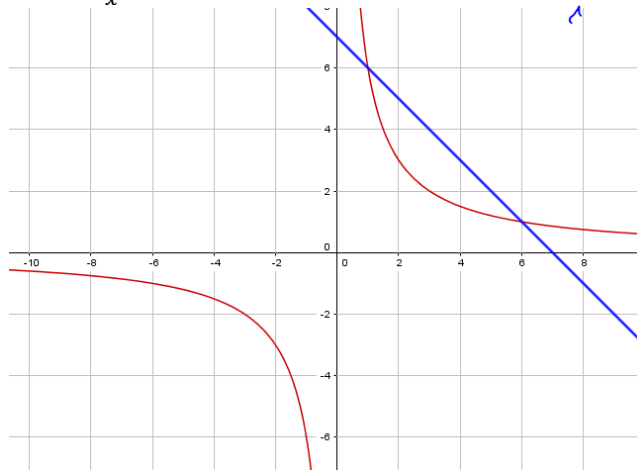
2) $y = 4x - x^2, y = 0, x = 5$ (v: 7/3)



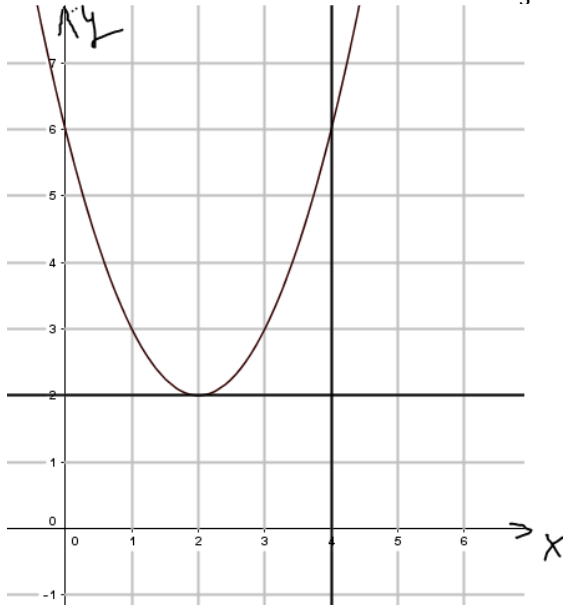
3) $y = 1 - x, y = 3 - 2x - x^2$ (v: 4,5)



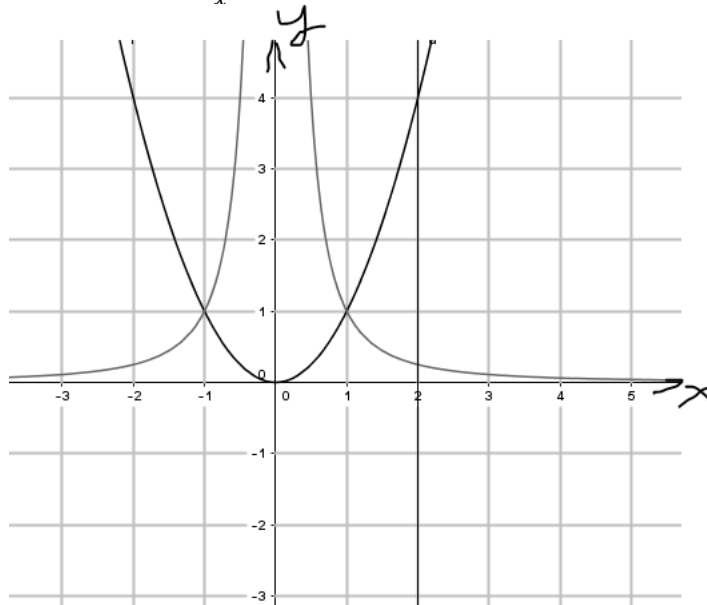
4) $y = \frac{6}{x}, y + x = 7$ (v: 17,5 - 6ln6)



5) $y = x^2 - 4x + 6, y = 2, x = 4$ (v: $2\frac{2}{3}$)



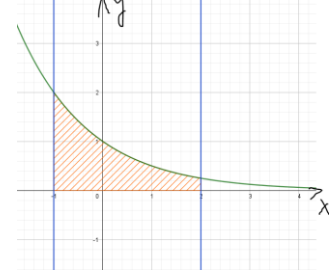
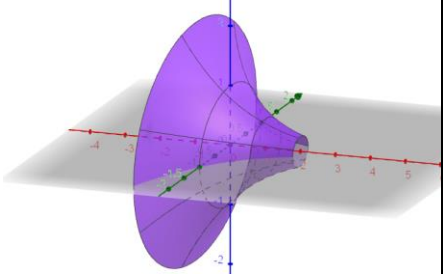
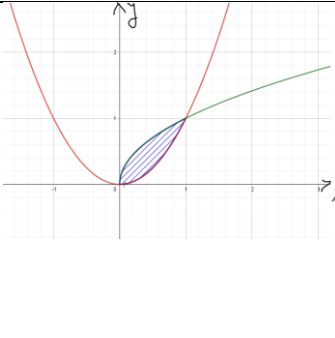
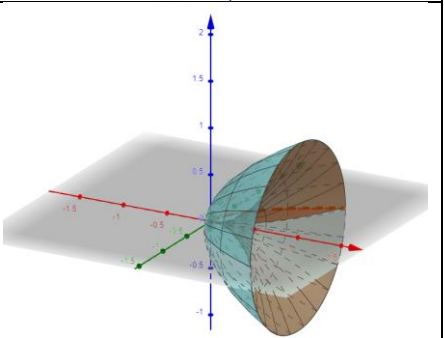
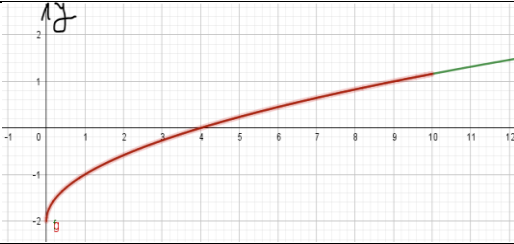
6) $y = x^2; y = \frac{1}{x^2}, y = 0, x = 2, x \geq 0$ (v: 5/6)



II Pöördkeha ruumala, *kaare pikkus, *pöörpind pindala

- 1) Leida keha ruumala, mis tekib joontega $y = 0,5^x$, $x = -1$, $x = 2$ piiratud kujundi pöörlemisel ümber x -telje
- 2) *Leida keha ruumala, mis tekib joontega $y = x^2$, $\sqrt{x} - y = 0$ piiratud kujundi pöörlemisel ümber x -telje.
- 3) *Leida joone $y = \sqrt{x} - 2$ kaare pikkus, kui $0 \leq x \leq 10$.
- 4) *Leia joone $y^2 = 4x$ pöörlemisel ümber x -telje tekkinud pöörpind pindala ($y \geq 0$; $0 \leq x \leq 3$).

Vastused.

<p>1) $V = \frac{63\pi}{32 \ln 2} \approx 8,9 \text{ üh}^3$</p>		
<p>2) $V = \frac{3\pi}{10} \approx 0,94 \text{ üh}^3$</p>		
<p>3) $l = \frac{1}{8}(4\sqrt{410} - \ln(81 - 4\sqrt{410})) \approx 10,8 \text{ üh}$</p>		
<p>4) $S = \frac{56\pi}{3} \approx 58,6 \text{ üh}^2$</p>	