

Funktsiooni mõiste, esitusviisid, graafik

1. Milline funktsioon on antud ilmutatud kujul?

a) $yx + 2 - \ln y = 0$

b) $y = x + 2 - \ln x$

c) $\begin{cases} y = 2 + t \\ x = -1 - 3t \end{cases}$

d) $y = 8$

2. Leida funktsiooni väärtus.

a) $f(x) = -x^2 + x, f(1) = ?$

b) $s(\phi) = \sin 2\phi - \cos^2 \frac{\phi}{3}, s(\pi) = ?$

3. Joonisel on antud funktsioonide graafikud. Leida igale graafikule vastav valem.

1) $y = \sqrt{4-x}$

2) $y = -4x + 3$

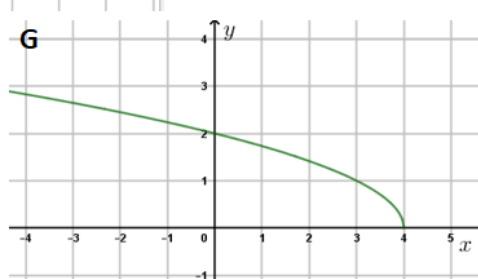
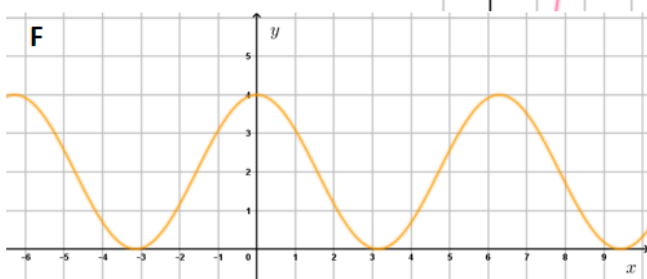
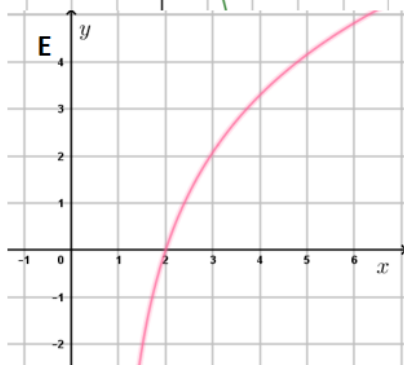
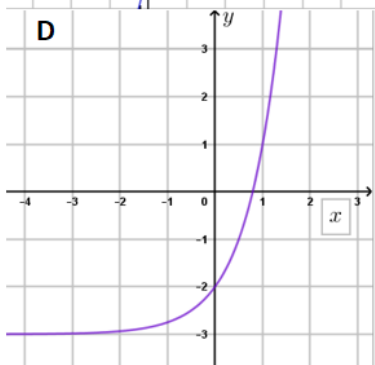
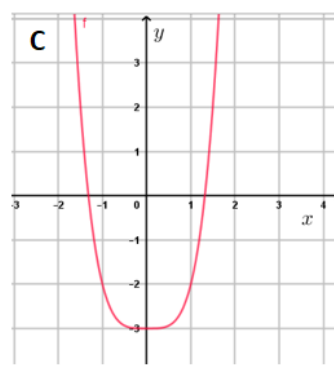
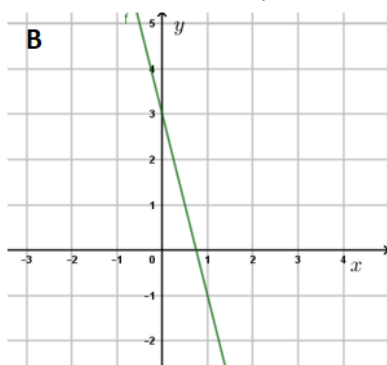
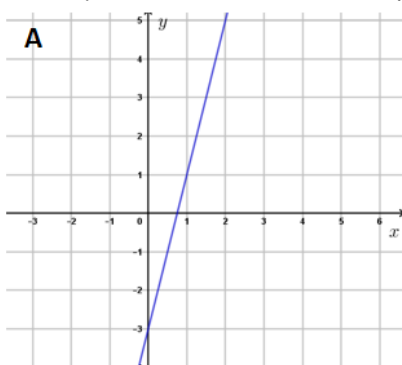
3) $y = 2 \cos x + 2$

4) $y = x^4 - 3$

5) $y = 4x - 3$

6) $y = 4^x - 3$

7) $y = 3 \ln(x-1)$



4. Leida graafiku järgi:

X - funktsiooni määramispiirkond

Y - funktsiooni muutumispiirkond

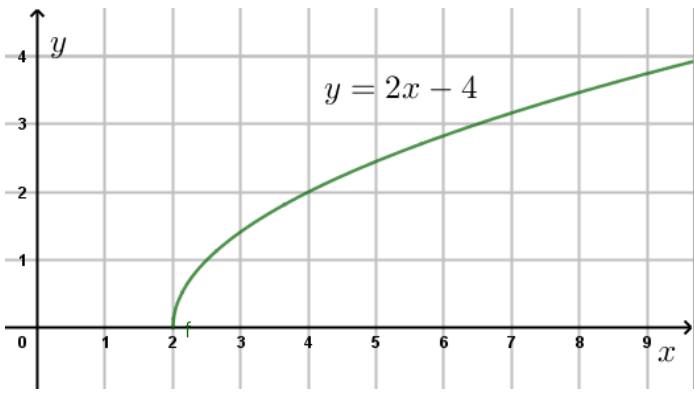
X^0 - funktsiooni nullkohad

X^+ - funktsiooni positiivsuspiirkond

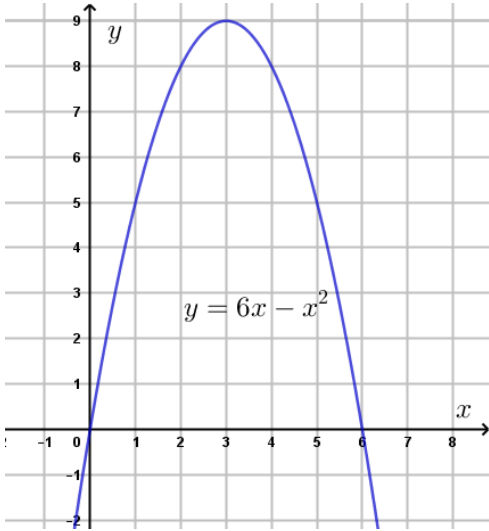
X^- - funktsiooni negatiivsuspiirkond

$X \uparrow$ - funktsiooni kasvamispiirkond

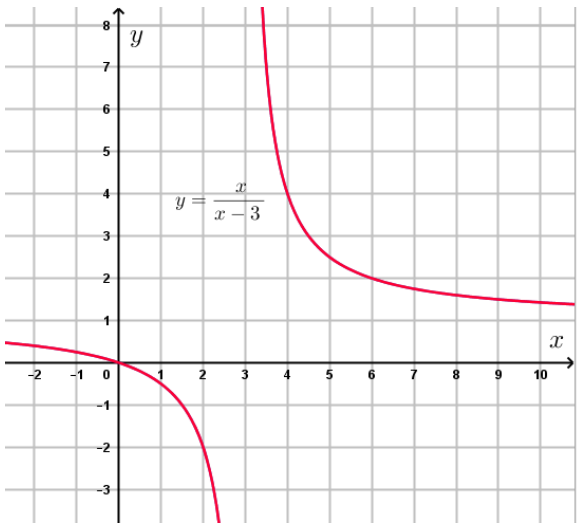
$X \downarrow$ - funktsioonikahenemispiirkond



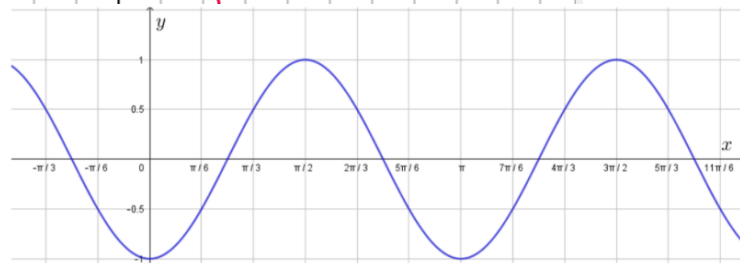
$X = \dots\dots\dots$
 $Y = \dots\dots\dots$
 $X^0 = \dots\dots\dots$
 $X^+ = \dots\dots\dots$
 $X^- = \dots\dots\dots$
 $X \uparrow = \dots\dots\dots$
 $X \downarrow = \dots\dots\dots$



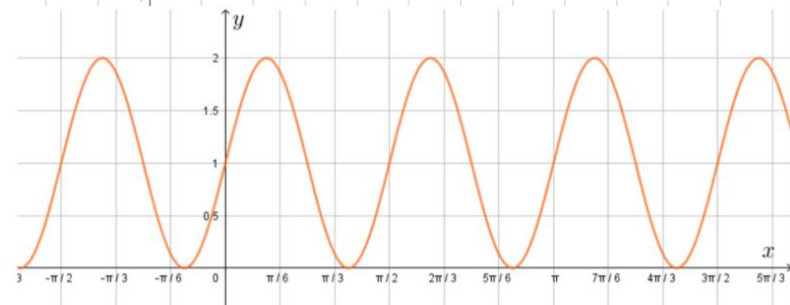
$X = \dots\dots\dots$
 $Y = \dots\dots\dots$
 $X^0 = \dots\dots\dots$
 $X^+ = \dots\dots\dots$
 $X^- = \dots\dots\dots$
 $X \uparrow = \dots\dots\dots$
 $X \downarrow = \dots\dots\dots$
 $y(4) = \dots\dots$



$X = \dots\dots\dots$
 $Y = \dots\dots\dots$
 $X^0 = \dots\dots\dots$
 $X^+ = \dots\dots\dots$
 $X^- = \dots\dots\dots$
 $X \uparrow = \dots\dots\dots$
 $X \downarrow = \dots\dots\dots$



Leida funktsiooni periood
 $T = \dots\dots\dots$



Leida funktsiooni periood
 $T = \dots\dots\dots$

Vastused

- b) ja d)
- a) 0; b) -0,25
- A5; B2; C4; D6; E7; F3; G1