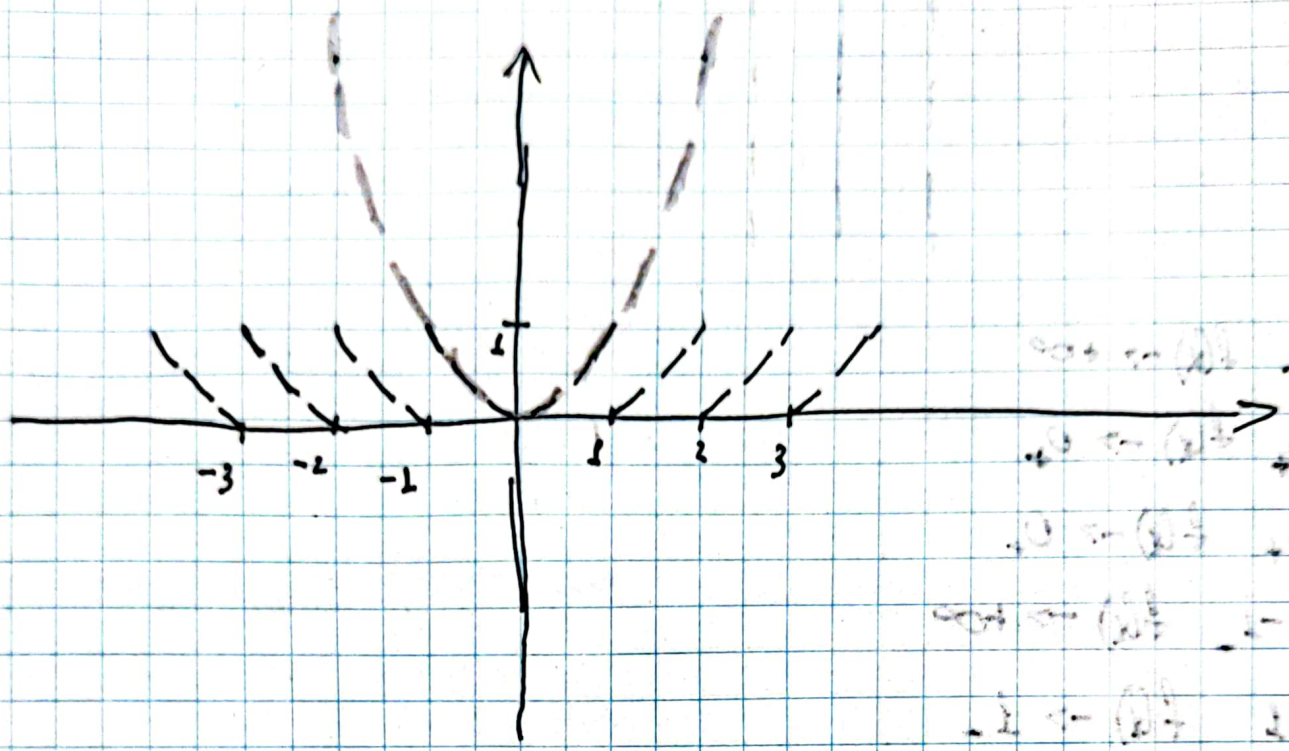
ДЗ

2.18 $f(x) = \{x^2\}$ (дробова) $\to$ $y \in [0;1)$



$x = 0 \quad y = 0$

$x = 0{,}1 \quad y = \{0{,}01\} = 0{,}01$

$x = 0{,}2 \quad y = \{0{,}04\} = 0{,}04$

$x = 1{,}1 \quad y = \{1{,}21\} = 0{,}21$ — однаково →

$x = 1{,}2 \quad y = \{1{,}44\} = 0{,}44$

$x = 1{,}9 \quad y = \{3{,}61\} = 0{,}61$

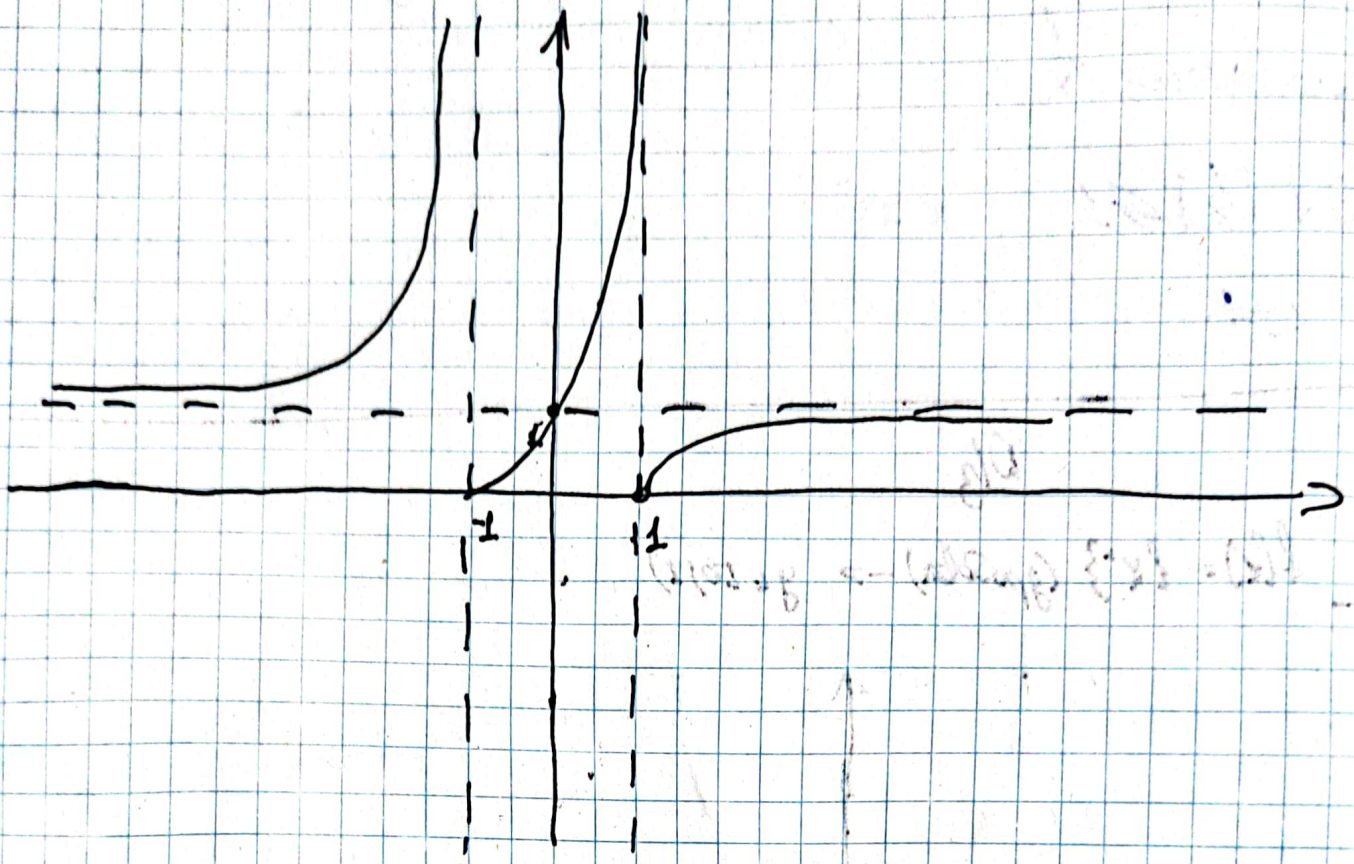
$x = 2{,}1 \quad y = \{4{,}41\} = 0{,}41$

$x = -0{,}1 \quad y = \{0{,}01\} = 0{,}01$

...

Scanned with CamScanner

2.24 $f(x) = e^{\frac{2x}{1-x^2}}$ $x \neq 1$ $x \neq -1$ $f(x) \geq 0$



при $x \to 1_-$ $f(x) \to +\infty$

при $x \to -1_+$ $f(x) \to 0_+$

при $x \to 1_+$ $f(x) \to 0_+$

при $x \to -1_-$ $f(x) \to +\infty$

при $x > 1$ $f(x) \to 1_-$

при $x < 1$ $f(x) \to 1_+$

при $x = 0$ $f(x) = e^0 = 1$

при $x \to \infty$ $f(x) \to 1$

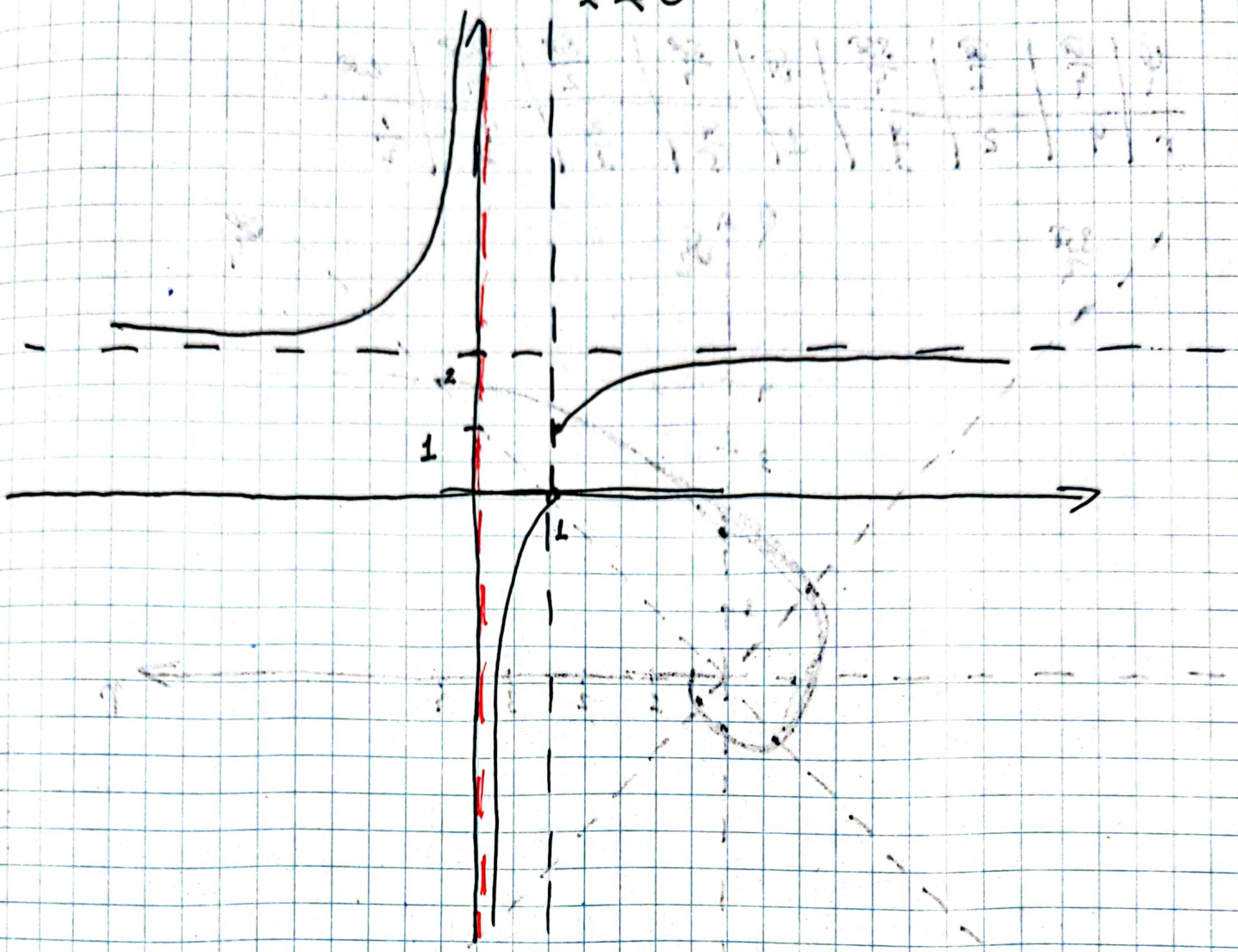
при $x \to -\infty$ $f(x) \to 1$

Scanned with CamScanner

2.26 $f(x) = \frac{1}{1-2^{\frac{x}{x-1}}}$

$x \neq 1$

$x \neq 0$



при $x \to 0_+$ $f(x) \to -\infty$

при $x \to 1_+$ $f(x) \to 2$

при $x \to 0_-$ $f(x) \to +\infty$

при $x \to 1_-$ $f(x) \to 0$

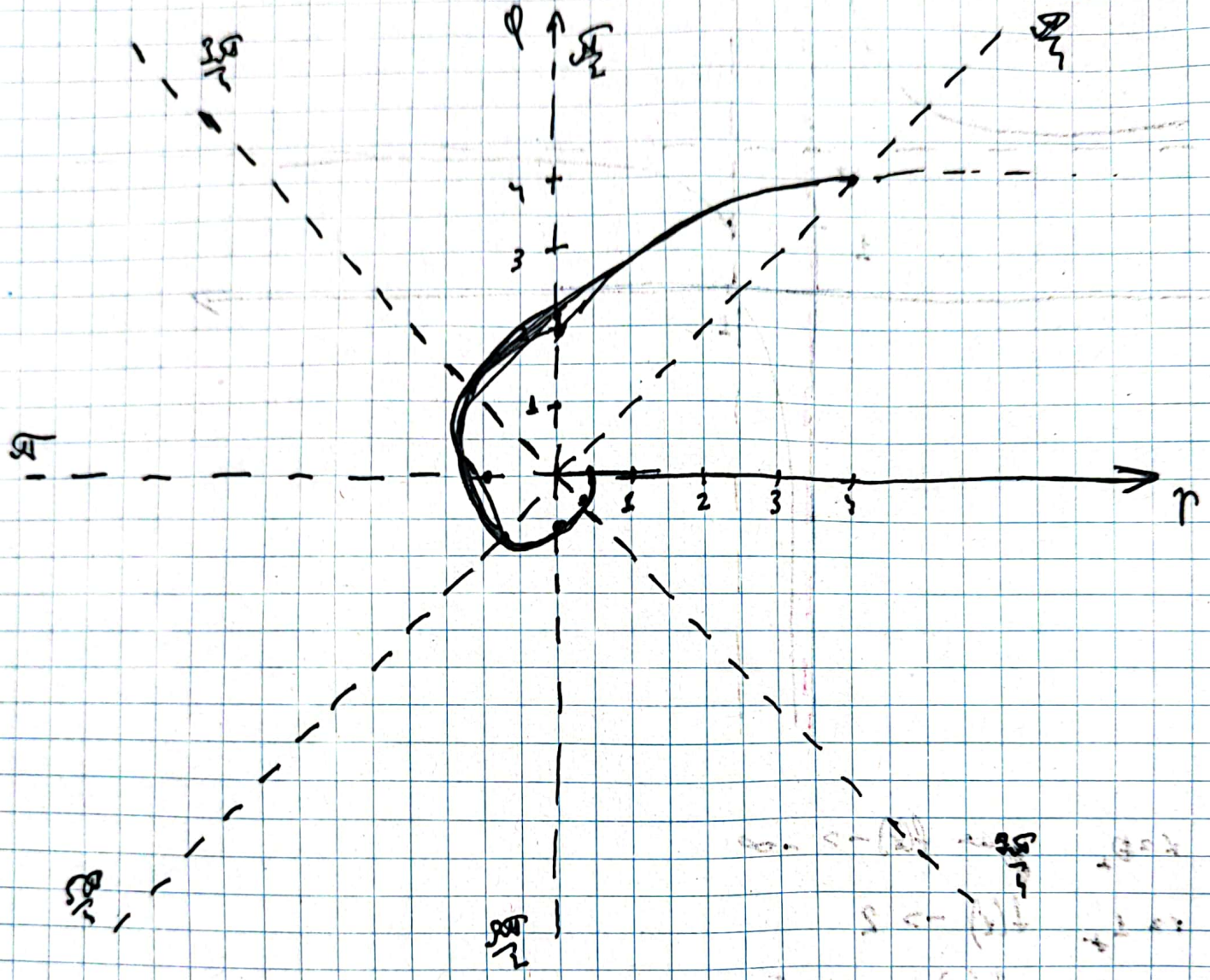
при $x \to -\infty$ $f(x) \to 2$

при $x \to +\infty$ $f(x) \to 2$

Scanned with CamScanner

2.29 $r = \frac{\pi}{\varphi}$

φ	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
r	4	2	$\frac{4}{3}$	1	$\frac{4}{5}$	$\frac{2}{3}$	$\frac{4}{7}$	$\frac{1}{2}$



2.31 $r = 2a\cos\varphi$, $a > 0$

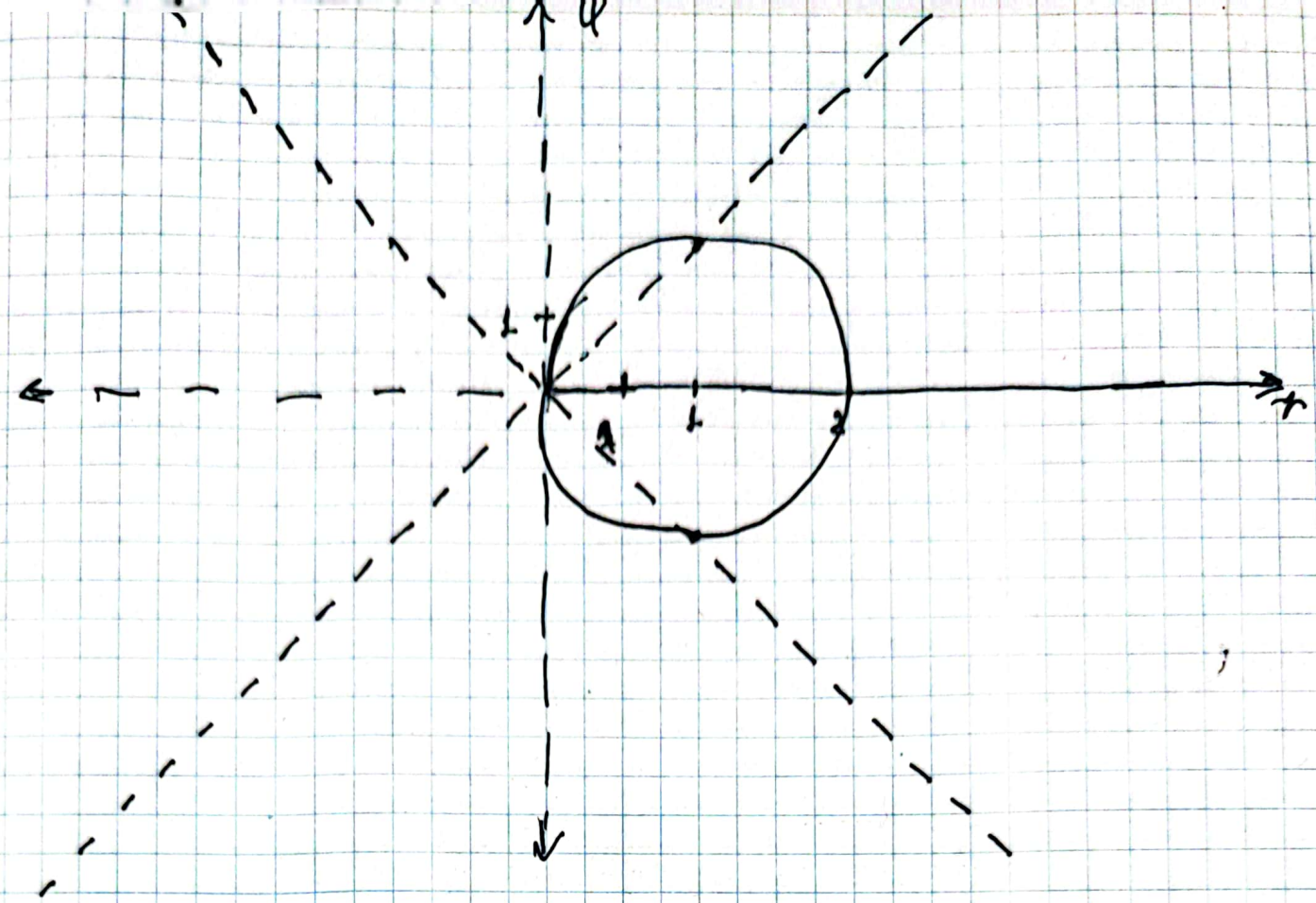
φ	$\frac{\pi}{4}$	$\frac{\pi}{2}$	$\frac{3\pi}{4}$	π	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
r	$a\sqrt{2}$	0	$-a\sqrt{2}$	$-2a$	$-a\sqrt{2}$	0	$a\sqrt{2}$	$2a$

$a = 1$

↓

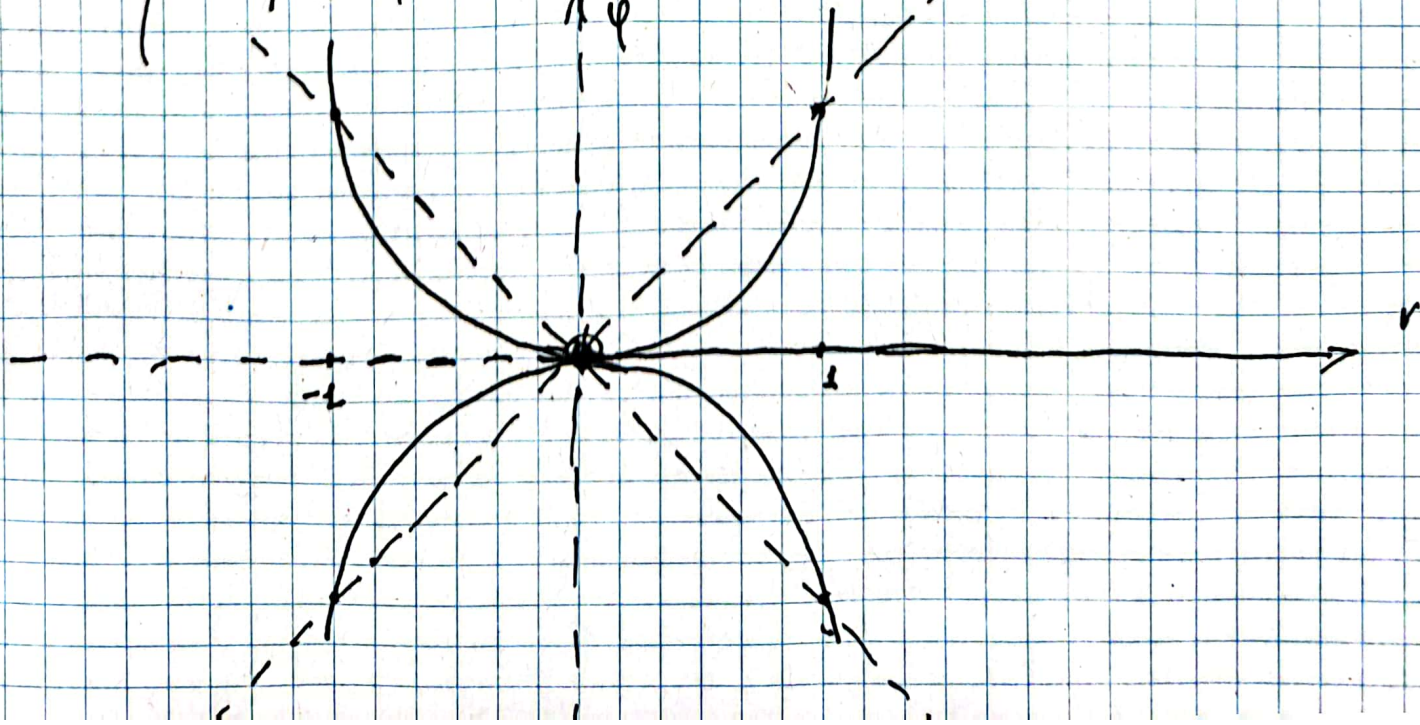
KOLO

Scanned with CamScanner



2.33 $r = \operatorname{tg}\varphi$

φ	0	$\frac{\pi}{4}$	$\frac{\pi}{2}$	π	$\frac{3\pi}{4}$	$\frac{5\pi}{4}$	$\frac{3\pi}{2}$	$\frac{7\pi}{4}$	2π
r	0	1	$-$	0	-1	1	$-$	-1	0



Scanned with CamScanner