

2.61
3

(1) $x(3-x^2) > 0$

$$\begin{array}{c} + \\ -\sqrt{3} \quad 0 \quad \sqrt{3} \\ - \end{array}$$

$$\begin{array}{c} x < -\sqrt{3} \\ 0 < x < \sqrt{3} \end{array}$$

(2) $\lim_{x \rightarrow \sqrt{3}^-} \frac{1}{\sqrt{x(3-x^2)}} = \frac{1}{+0} = \infty \rightarrow x = \sqrt{3}$

$\lim_{x \rightarrow -\sqrt{3}^-} \frac{1}{\sqrt{x(3-x^2)}} = \frac{1}{+0} = \infty \rightarrow x = -\sqrt{3}$

$\lim_{x \rightarrow 0^+} \frac{1}{\sqrt{x(3-x^2)}} = \frac{1}{+0} = \infty \rightarrow x = 0$

$m = \lim_{x \rightarrow -\infty} \frac{1}{x\sqrt{x(3-x^2)}} = 0$, $n = \lim_{x \rightarrow \infty} \frac{1}{\sqrt{x(3-x^2)}} = 0 \rightarrow y = 0$

(3) פניבן של y/min

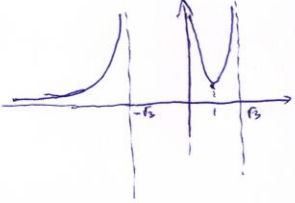
(4) $f' = \frac{2-x^2-2x^2}{-2\sqrt{x(3-x^2)}} = \frac{-3x^2+2}{-2\sqrt{x(3-x^2)}} \rightarrow x = \pm 1$

$x = -1$? מאב/מאב

-2	$-\sqrt{3}$	0	$\frac{1}{2}$	1	$\frac{1}{2}$	$\sqrt{3}$
+			0	+	+	+
↑			↓ min	↑	↑	

$1 < x < \sqrt{3}$: מ"מ
 $0 < x < 1$: מאב/מאב

$\min(1, \frac{1}{\sqrt{2}})$



$z = \frac{1}{\sqrt{x(3-x^2)}} + a$

(5)

$z - a = \frac{1}{\sqrt{x(3-x^2)}}$

$z - \frac{1}{\sqrt{2}} < a < z \leftarrow a < z - a < \frac{1}{\sqrt{2}}$

מאב/מאב
מאב/מאב

$a < z - \frac{1}{\sqrt{2}}$

$\leftarrow z - a = \frac{1}{\sqrt{2}}$

מאב/מאב

$a > z$

$\leftarrow z - a < 0$

מאב/מאב