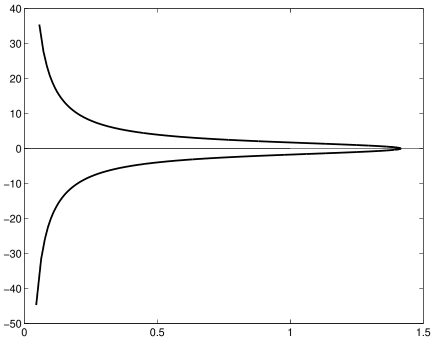
Svar till

Kompletterande övningar till Matematisk analys i flera variabler

1a: $1/\sqrt{2}$, 1b: $\pi/4$, 1c: $\arccos(1/\sqrt{5})$.

3a: $(r,\theta) = (2, -\pi/3)$, 3b: $(r,\theta) = (2, 3\pi/2)$, 3c: $(r,\theta) = (5, -\arctan(4/3))$

4:

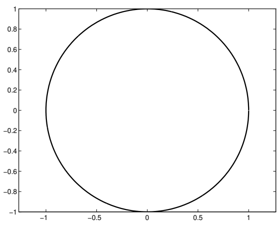


Obs skalan!

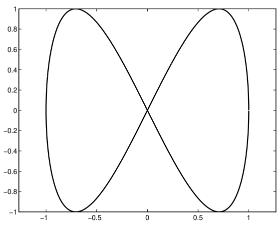
5a: $(r,\theta,\phi) = (2\sqrt{2}, \pi/4, \pi/6)$, 5b: $(r,\theta,\phi) = (2, 3\pi/4, \pi/4)$

7a: $M = \{(x,y); (x-3.5)^2 + y^2 > 1, x > 3\sqrt{5}|y|/2\}$
7b: $M = \{(x,y); x < 2 + 3(|y|), x > 4|y|/3\}$

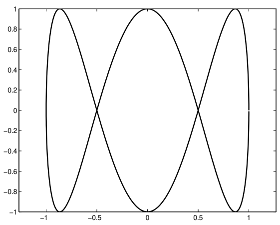
8:



$n = 1$



$n = 2$



$n = 3$

9:

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Öppen								x	
Sluten		x	x		x	x	x		x
Begränsad	x		x		x	x		x	x
Kompakt			x		x	x			x

10: $x(t) = \sqrt{3/2}\cos(t)$, $y(t) = \sqrt{3}\sin(t)$, $x(t) = \frac{3}{2}\cos^2(t)$