ב ③

$$\cancel{\frac{t\cdot y}{t^2+y^2} =}$$

$$\cancel{f_x = \frac{(x+h)^8\cdot 0 - 0\cdot x^8\cdot 0}{h} = \frac{h^8}{h} = h^7 = 0}$$

$$\cancel{f_y = \frac{x^8(y+h) - x^8 y}{h}}$$

$$f_x = \frac{\frac{(x+h)^8\cdot 0 - 0}{(x+h)^{16}+y^2} - 0 - \frac{x^8 y}{x^{16}+y^2}}{h} =$$

$$\frac{\frac{h^8\cdot 0}{h^{16}}}{h} = \frac{0\cdot h^8}{h^8} = 0$$

$$f_y = \frac{\frac{x^8(y+h)}{0+x^{16}+(y+h)^2} - \frac{x^8\cdot y}{x^{16}+y^2}}{h} = 0$$

$$\lim \frac{f(x,y) - 0 - 0 - 0}{\sqrt{\Delta x^2 + \Delta y^2}} =$$

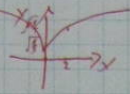
המשך

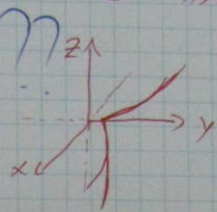
(5) $-3x^2+5y^2+7z^2-1=0$

עבור $z=0$

$-3x^2+5y^2-1=0$

$y=\sqrt{\frac{3x^2+1}{5}}$





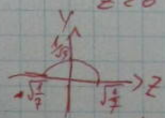
עבור $z=0$ ברמה ~~[illegible]~~
פרבולה

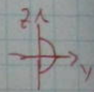
עבור $x=0$

נשווה את x ל-0 ונתבונן בציר yz

$5y^2+7z^2-1=0$

$y=\sqrt{\frac{1-7z^2}{5}}$



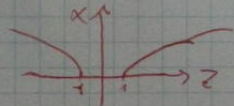


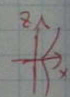
$-\sqrt{\frac{1}{7}}\le z\le\sqrt{\frac{1}{7}}$ $\quad z^2\le\frac{1}{7}$ $\quad 7z^2\le1 \Leftarrow \frac{1-7z^2}{5}\ge0$

נשווה את y ל-0 ונתבונן בציר zx

$-3x^2+7z^2-1=0$

$x=\sqrt{\frac{7z^2-1}{3}}$

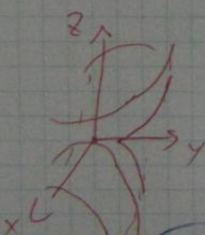




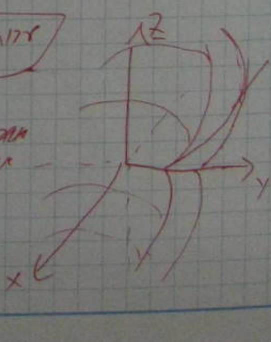
$\frac{7z^2-1}{3}\ge0$ $\quad 7z^2\ge1$ $\quad z^2\ge1$ $\quad z\ge1$ או $z\le-1$

עבור $z=\pm\sqrt{\frac{1}{7}}$ נקבל נקודה

עבור $z\ge1$ או $z\le-1$
נקבל היפרבולה



אמור להיות
כמו האנגר
אך מבוסים..
אני צריך עזרה



-15

[illegible] $S \circ T$ [illegible] $T \circ S$ [illegible]

[illegible] $T \circ S$ [illegible]

[illegible]

[illegible] $T \circ S$ [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

$$A = \left(\begin{array}{cc|c} 1 & 0 & x \\ 0 & 0 & 0 \end{array}\right) \quad \boxed{\begin{matrix} y = -y \\ x = 0 \end{matrix}}$$

~~$(x,y) = 0 \cdot x(1,0) + y(0,1) = 0$~~

$$x\mathbb{1} - A = \begin{pmatrix} x-1 & 0 \\ 0 & x \end{pmatrix} \overset{det}{\Longrightarrow} (x-1)x = 0$$

$x = 0 \quad x = 1$ [illegible]

$\downarrow \quad \downarrow$ [illegible]

$1 \quad 1$

$(z+$

$|z-1+i| = |z+1-i|$

$(x+1+i(y+1))^2$

$|x+yi-1+i| = |x+yi+1-i|$

$(x+1)^2 + 2(x+1)i(y+1)$

$|x-1+i(y+1)| = |x+1+i(y-1)|$

$+i^2(y+1)^2$

$x^2+2x+1+2i(x+1)(y+1)-(y+1)^2$

$2i(xy+x+y+1)$

x^2+2x+1

$x^2+2x+1+2i(x+1)(y-1)-(\ldots$

$x^2+2x+1+2i(xy+x+y+1)-y^2+2y-1$

$x^2-y^2+2(x-y)+2i(xy+x+y+1)$

$-x-1 \quad x-1$

$(x+y)(x-y)$

$2i(x+1)(y-1) = |(x+1)(y+\ldots$

$(x-y)(x+y+2)+2i(xy+x+y+1)$

$|y-1| = |y+1|$

$y=0$

$x=0$

$x^2+2x+1+2i(x+1)(y-1)-(y^2-2y+1)$

$x^2-y^2+2x+2y+2i(x+1)(y-1)$

$(x-y)(x+y)+2(x+y)$

$|(x+y)(x-y+2)+2i(x+1)(y-1)| = |(x-y)(x+y+2)+2i(x+1)(y+1)|$

$|(x+y)(x-y+2)| = |(x-y)(x+y+2)|$

$|x^2-y^2+2x+2y| = |x^2-y^2+2x-2y|$

$|2y| = |-2y|$ $\underline{y=0}$

שאלה מס' 4

4א (15 נק') נתונים שני ישרים:

$$\begin{cases} 2x-3y+z+1=0 \\ 2x+y-2z+2=0 \end{cases} \quad \text{-ו} \quad \frac{x}{5}=\frac{y}{6}=\frac{z-1}{8}$$

מצאו משוואת המישור המכיל את שני הישרים (אם קיים).

$\cancel{4x}-2y\cancel{-3z}=0$

$5,6,8$

$5,6,3$

$+4y=\frac{3z-1}{-4}$

$2x-6y$

$6x-5y+4=0$ $\quad \frac{6x+4}{5}=y$

$6x=\frac{+5y-4}{6}$

$\frac{6x+4}{5}=\frac{5y-4}{6}=\frac{3z-1}{-4}$

$\frac{x}{5}=\frac{6x+4}{5}$ $\quad \frac{-5x-4}{5}=0$ $\quad x=-\frac{4}{5}$

$\frac{y}{6}=\frac{5y-4}{6}$

$-4y=-4$

$y=1$

$-\frac{3z-1}{4}=\frac{2z-2}{4}$

$5z=3$ $\quad$ נק' משותפת $\left(-\frac{4}{5},1,\frac{3}{5}\right)$

$z=\frac{3}{5}$

נגמר לי הזמן צריך רק למצוא משוואה של מכפלה וקטורית של הישרים עם הנקודה.

0

③ א.

$$\underbrace{f(tx,ty)}_{\mathrm{I}} = \underbrace{t^2 f(x,y)}_{\mathrm{II}}$$

נגזור לפי t.

נגזור
$tx = u$
$ty = w$

I $\quad f_t = f_u \cdot u_t + f_w \cdot w_t$

$= f_u \cdot x + f_w \cdot y$

הערה 10

$$\begin{array}{ccc} & f & \\ u & & w \\ x\quad t & & t\quad y \end{array}$$

נגזור לפי x.

$f_x = f_u \cdot t + f_w \cdot t =$

~~שווה לפי $t=1$.~~

II $\quad \left(t^2 f(x,y)\right)'_t = 2t \cdot f(x,y) = f_u \cdot x + f_w \cdot y$

$\boxed{t=1} \rightarrow$ מציבה במשוו.

$\Leftarrow \quad 2f(x,y) = f_u \cdot x + f_w \cdot y$

$$\frac{\partial f}{\partial tx}\cdot x + \frac{\partial f}{\partial ty}\cdot y$$

$$\cancel{f_x = (f_1 + f_w) =}$$

$$\cancel{f_{xt} = \frac{\partial f}{\partial tx} \cdot t + t \frac{\partial f}{\partial ty} \cdot x}$$

??

$$(2f(x,y))'_x = \left(\frac{\partial f}{\partial tx} \cdot x\right)'_x = \frac{\partial^2 f}{\partial (tx)^2} \cdot x + \frac{\partial f}{\partial tx} = f(x,y)$$

$$(2f(x,y))'_y = \left(\frac{\partial f}{\partial ty} \cdot y\right)'_y = \frac{\partial^2 f}{\partial (ty)^2} \cdot y + \frac{\partial f}{\partial ty} \cdot f(x,y)$$

??

$$2f(x,y) = f_1 \cdot x + f_w \cdot y = \frac{\partial f}{\partial xt} x + \frac{\partial f}{\partial yt} t$$

$$2f(x,y) = f_{xy} + f_{xy} =$$

$$2\left(\frac{\partial^2 f}{\partial (tx)^2} x + \frac{\partial f}{\partial tx}\right) \cdot x + \left(\frac{\partial f}{\partial (ty)^2} \cdot y + \frac{\partial f}{\partial ty}\right) \cdot y$$

$$= \frac{\partial^2 f}{\partial tx} \cdot x^2 + 2 \frac{\partial^2 f}{\partial x \partial y} x \cdot y + y^2 \cdot \frac{\partial^2 f}{\partial (ty)^2}$$

??

$$t = 1 \quad f(tx, ty) = t^2 f(x,y)$$

גזור נמשיך

הערות הבודק