#flo #inclass

1 | **best fit lines review**

1.0.1 |**general form:**

$$\begin{bmatrix} x_1 & 1 \\ x_2 & 1 \end{bmatrix} * \begin{bmatrix} m \\ b \end{bmatrix} = \begin{bmatrix} y_1 \\ y_2 \end{bmatrix}$$

$m \cdot x_1 + b = y_1 \; m \cdot x_2 + b = y_2$

can only find lines if they are not colinear

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can use determinant to check if lines are colinear
parrel or equal
if it's 0
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solve for slopes, simplify, and you get $0 = ad - bc$ damn that's cool!

1.0.2 |**can't solve when ad=bc, or -b/a = -d/c**

for example, $ \begin{bmatrix} 1 & 2 \\ 1 & 2 \end{bmatrix} $ because $1 * 2 = 1 * 2$

or

$ \begin{bmatrix} 2 & 4 \\ 1 & 2 \end{bmatrix} $ because $2 * 4 = 1 * 4$

two axis in 3 space

we listerally have grapher… bro #review play with grapher it's cool

parrell lines which start at 0 are colinear