comet's path: $\mathrm{y}=\bar{x}$

## Slope-comet's path $=1.00$

$j: y=-1.00 x-7.01$
C: $(-3.5 \overline{1},-\overline{3} . \overline{5} \overline{1})$
$C D=0.10 \mathrm{~cm}$
$-4$

2 -
$j$
$-10$
$-5$

B

## Cosmic Emergency

Line A $\bar{B}$ represents the comet's path
Circle at $(-2,-5)$ with radius 2 represents the planet
The graph shows that the comet will not hit the planet.
By constructing and measuring the segement $C D$, we can see the comet will pass by at a distance of one tenth of a unit.

This version of the sketch demonstrates why it is necessary to know the math behind a process. The math for what is depicted here easily and clearly tells us the intercept of the perpendicular line, $j$, should be -7 and not -7.01 as computed here. Also, the coordinates of point $C$ should be $(-3.5,-3.5)$, not $(-3.51,-3.51)$. Someone who understands the math will see that these are rounding ē̄rōrs̄.

