

perpendicular line

Slope negative reciprocal

Slope of FH

Rise -2
Run 2

$-\frac{1}{1}$

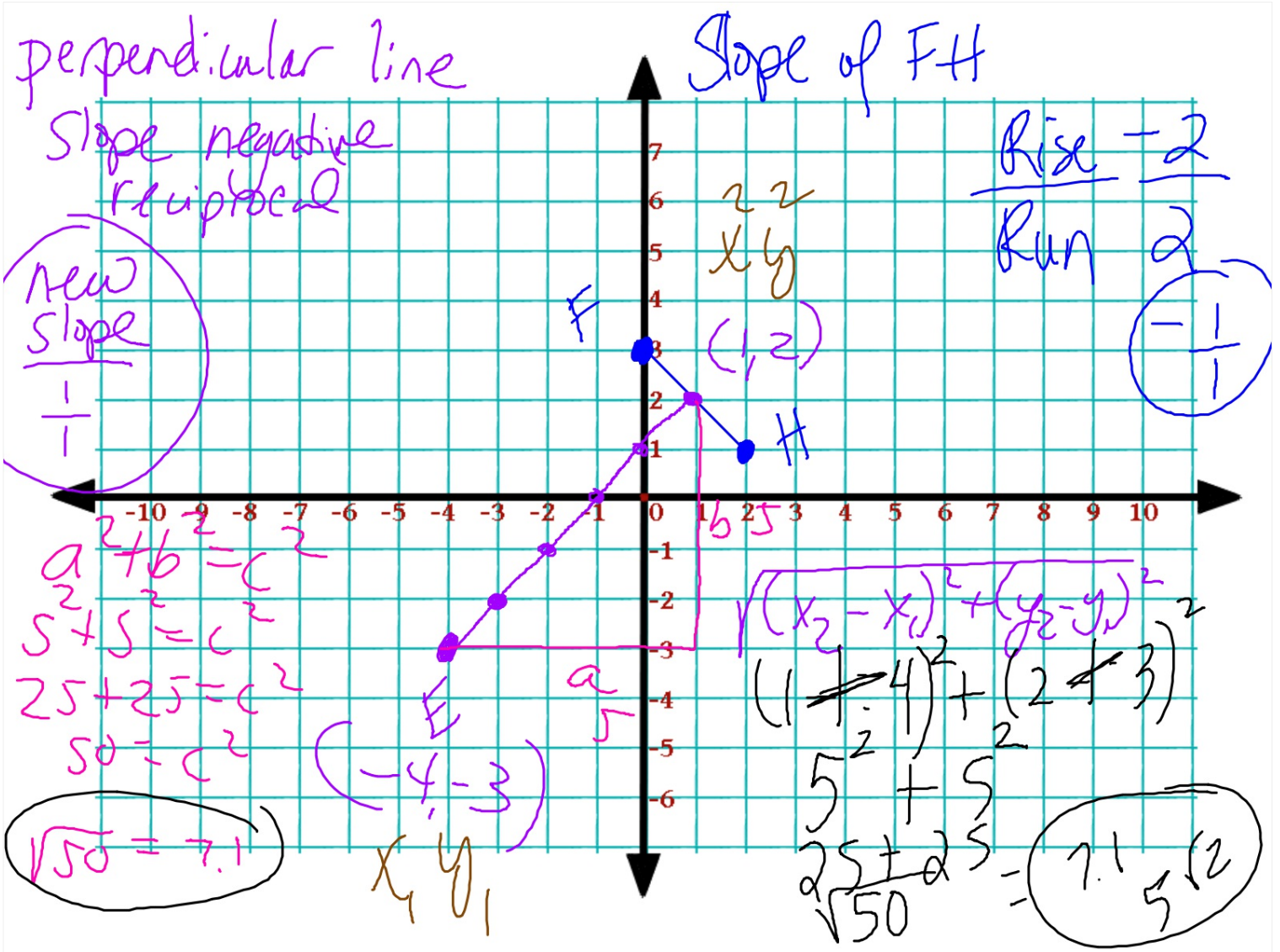
New Slope
 $\frac{1}{1}$

$$\begin{aligned} a^2 + b^2 &= c^2 \\ 5^2 + 5^2 &= c^2 \\ 25 + 25 &= c^2 \\ 50 &= c^2 \end{aligned}$$

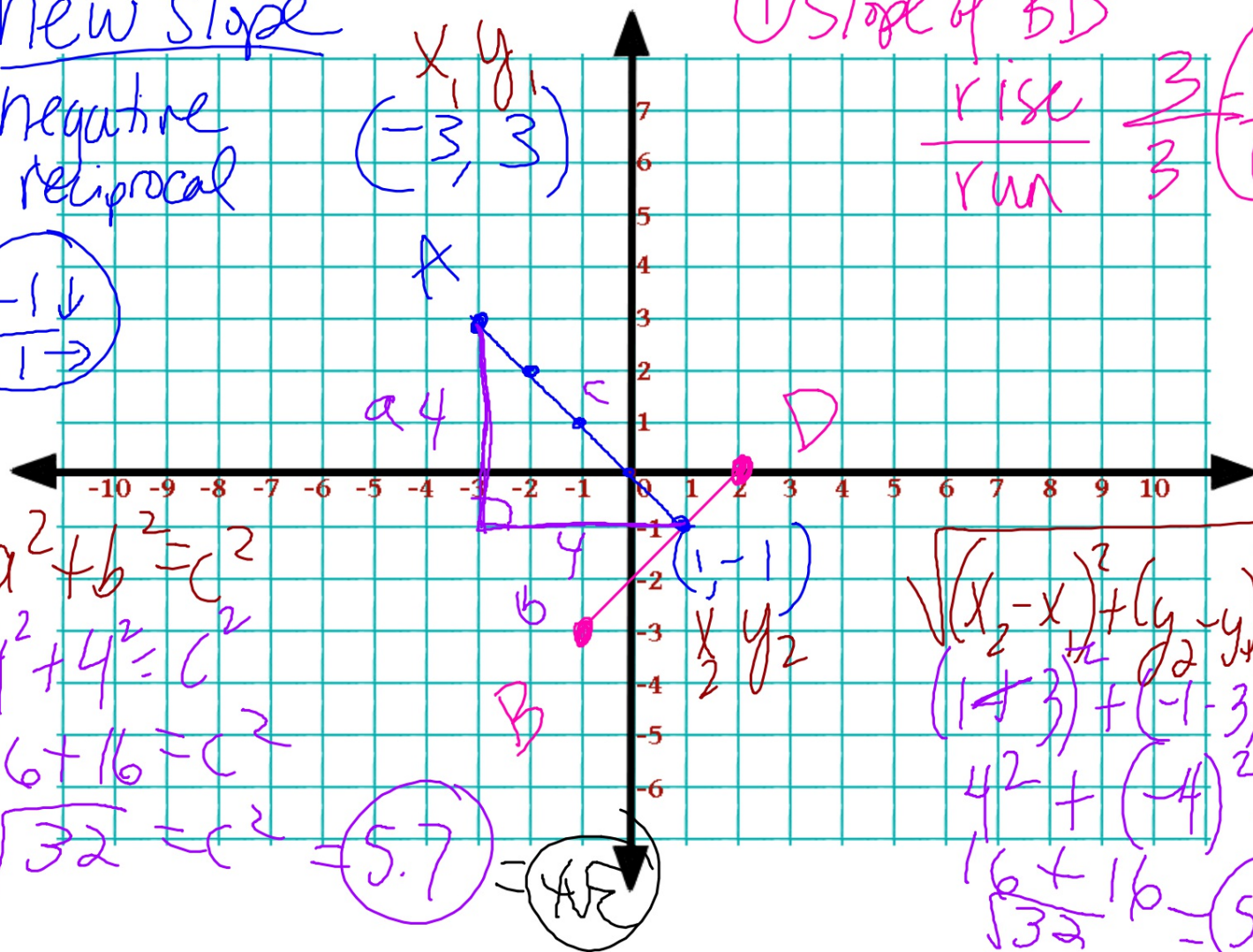
$$\sqrt{50} = 7.1$$

$(-4, -3)$
 x_1, y_1

$$\begin{aligned} &\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \\ &= \sqrt{(1 - (-4))^2 + (2 - (-3))^2} \\ &= \sqrt{5^2 + 5^2} \\ &= \sqrt{25 + 25} = \sqrt{50} = 7.1 \end{aligned}$$



negative reciprocal

$$(-3, 3)$$
$$\frac{\text{rise}}{\text{run}} = \frac{3}{3} = 1$$


$$a^2 + b^2 = c^2$$

$$4^2 + 4^2 = 6^2$$

$$16 + 16 = 32$$

$$\sqrt{32} = c^2 = 5.7$$

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$\sqrt{(1 - 3)^2 + (-1 - 3)^2}$$

$$\sqrt{4^2 + (-4)^2}$$

$$\sqrt{16 + 16} = \sqrt{32} = 5.7$$