

19.
$$4x - 5y = 12$$
 $\rightarrow 4x - 5y - 12 = 0$

$$4x - 5y = 6$$

$$(-1, -2)$$

$$d = \begin{vmatrix} 4(-1) - 5(-2) - 12 \\ \hline \sqrt{4^2 + (-5)^2} \end{vmatrix}$$

$$d = \begin{vmatrix} -6 \\ \hline \sqrt{41} \end{vmatrix} = \frac{6}{\sqrt{41}}$$

21. y = -3x + 6 (0, 6)

$$3x + y = 4$$

$$3x + y - 4 = 0$$

$$d = \left| \frac{3(0) + 1(6) - 4}{\sqrt{3^{2} + 1^{2}}} \right| = \frac{2}{\sqrt{10}} = \frac{2\sqrt{10}}{\sqrt{5}}$$

23.
$$y = -\frac{3}{2}x$$
 (0,0)
 $y = -\frac{3}{2}x - 4$
 $(0 = -\frac{3}{2}x - y - 4)$ $(0 = -\frac{3}{2}x - 2y - 8)$
 $d = \begin{vmatrix} -\frac{3}{2}(0) - 1(0) - 4 \\ \sqrt{(-\frac{3}{2})^2 + (-1)^2} \end{vmatrix} = \begin{vmatrix} -4 \\ \sqrt{\frac{13}{4}} \end{vmatrix} = \frac{4}{\frac{\sqrt{13}}{2}}$
 $= 4 \cdot \frac{2}{\sqrt{13}} = \frac{8}{\sqrt{13}} + \frac{8\sqrt{13}}{13}$