March 262013 7th.gwb - 1/2 - Tue Mar 262013 13:36:44

19. $4 x-5 y=12 \rightarrow 4 x-5 y-12=0$ $4 x-5 y=6$

$$
\begin{gathered}
4 x-5 y=6 \\
(-1,-2)
\end{gathered} \quad d=\left|\frac{4(-1)-5(-2)-12}{\sqrt{4^{2}+(-5)^{2}}}\right|
$$

$$
d=\left|\frac{-6}{\sqrt{41}}\right|=\frac{6}{\sqrt{41}}=\frac{6 \sqrt{41}}{41}
$$

$$
\begin{aligned}
& \text { 21. } y=-3 x+6 \quad(0,6) \\
& 3 x+y=4 \\
& 3 x+y-4=0 \\
& d=\left|\frac{3(0)+1(6)-4}{\sqrt{3^{2}+1^{2}}}\right|=\frac{2}{\sqrt{10}}=\frac{2 \sqrt{10}}{10}=\frac{\sqrt{10}}{5}
\end{aligned}
$$

$$
\begin{aligned}
& \text { 23. } \begin{aligned}
& y=-\frac{3}{2} x \quad(0,0) \\
& y=-\frac{3}{2} x-4 \\
&(0\left.=-\frac{3}{2} x-y-4\right) 2 \rightarrow 0=-3 x-2 y-8 \\
& d=\left|\frac{-\frac{3}{2}(0)-1(0)-4}{\sqrt{\left(-\frac{3}{2}\right)^{2}+(-1)^{2}}}\right|=\left|\frac{-4}{\sqrt{\frac{\sqrt{3}}{4}}}\right|=\frac{4}{\frac{\sqrt{13}}{2}} \\
&=4 \cdot \frac{2}{\sqrt{13}}=\frac{8}{\sqrt{13}}=\frac{8 \sqrt{13}}{13}
\end{aligned}
\end{aligned}
$$

