(21) $xy = -8$

$\cot 2\theta = \frac{A-C}{B} = 0$ $\qquad 2\theta = \pi/2$, $\theta = \pi/4$

$x = x'\cos\theta - y'\sin\theta$

$x = \frac{\sqrt{2}}{2}x' - \frac{\sqrt{2}}{2}y'$

$x = \frac{\sqrt{2}}{2}(x'-y')$

$y = x'\sin\theta + y'\cos\theta$

$y = \frac{\sqrt{2}}{2}x' + \frac{\sqrt{2}}{2}y'$

$y = \frac{\sqrt{2}}{2}(x'+y')$

$\frac{1}{2}(x'-y')(x'+y') = -8$

$(x'-y')(x'+y') = -16$

$\frac{x'^2}{-16} - \frac{y'^2}{-16} = \frac{-16}{-16}$

$$\frac{(y')^2}{16} - \frac{(x')^2}{16} = 1$$