Convert each equation from rectangular to polar form.

15) $(x+1)^2 + y^2 = 1$

$x^2 + 2x + 1 + y^2 = 1$

$x^2 + y^2 + 2x = 0$

$r^2 + 2r\cos\theta = 0$

$r(r + 2\cos\theta) = 0$

$\boxed{r = -2\cos\theta}$

16) $x = \dfrac{y^2}{5}$

$r\cos\theta = \dfrac{1}{5} r^2 \sin^2\theta$

$\dfrac{r\cos\theta}{r} = \dfrac{1}{5}\dfrac{r^2\sin^2\theta}{r}$

$\cos\theta = \dfrac{1}{5} r \sin^2\theta$

$\boxed{r = \dfrac{5\cos\theta}{\sin^2\theta}}$

Convert each equation from polar to rectangular form.

17) $r = -4\cos\theta + 2\sin\theta$

$r^2 = -4r\cos\theta + 2r\sin\theta$

$\boxed{x^2 + y^2 = -4x + 2y}$

18) $\tan\theta = 1$

$\dfrac{r}{r} \cdot \dfrac{\sin\theta}{\cos\theta} = 1$

$\boxed{\dfrac{y}{x} = 1}$

19) $r = 3\tan\theta\sec\theta$

$r = \dfrac{3\sin\theta}{\cos\theta} \cdot \dfrac{1}{\cos\theta}$

$r\cos^2\theta = 3\sin\theta$

$r^2\cos^2\theta = 3r\sin\theta$

$(r\cos\theta)^2 = 3r\sin\theta$

$\boxed{x^2 = 3y}$

20) $r = 4\sin\theta$

$r^2 = 4r\sin\theta$

$\boxed{x^2 + y^2 = 4y}$