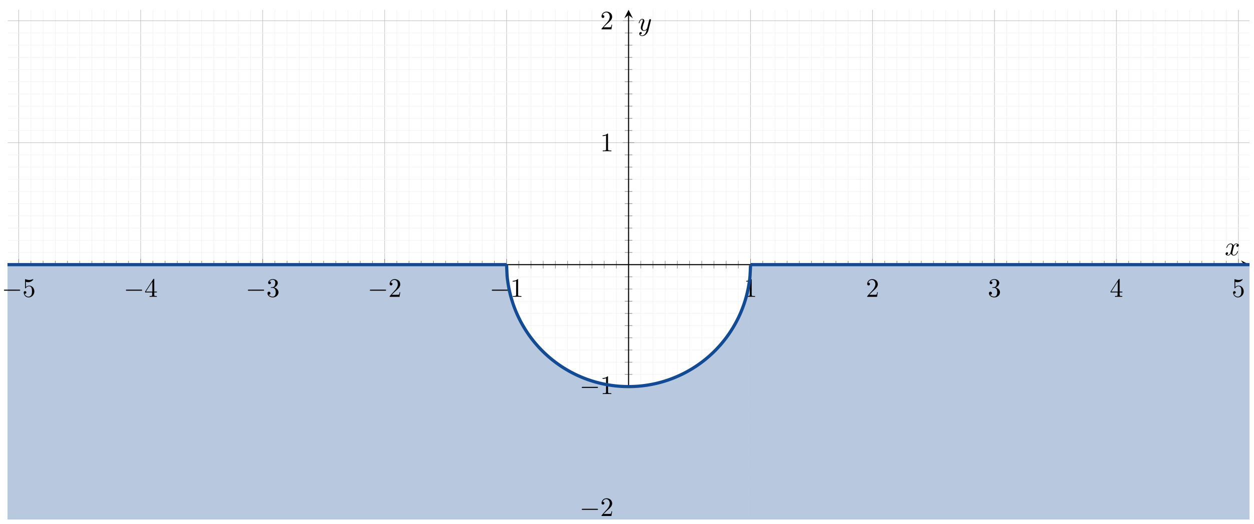
6. (a) $\mathbb{R}$. Since $x^3 - x^2 + x - 1$ is a polynomial, it is defined on all of $\mathbb{R}$.
   (b) $(-\infty, 2]$. The function $\sqrt{4-2x}$ is only defined if $(4-2x)$ is positive, i.e. if $x \leq 2$.
   (c) $(-\infty, -3) \cup (-3, 3) \cup (3, \infty)$. The function $\frac{7}{x^2-9}$ is defined iff its denominator is non-zero – that is if $x \neq \pm 3$.

7. (a) $-45° = -\frac{\pi}{4}$
   (b) $315° = \frac{7\pi}{4}$
   (c) $10° = \frac{\pi}{18}$
   (d) $\frac{\pi}{9} = 20°$
   (e) $\frac{5\pi}{4} = 225°$
   (f) $-\frac{3\pi}{2} = -270°$

8. (a) $(x, y) = (r\cos\theta, r\sin\theta) = (2\sqrt{3}\cos\frac{2\pi}{3}, 2\sqrt{3}\sin\frac{2\pi}{3}) = (-\sqrt{3}, 3)$.
   (b) The are many possible answers: We can calculate that $r = \sqrt{x^2+y^2} = \sqrt{2}$ and $\theta = \tan^{-1}\frac{y}{x} = \tan^{-1}(-1) = -\frac{\pi}{4}$. So one possible answer is $(\sqrt{2}, -\frac{\pi}{4})$.
   (c) $(1080, 0)$

9. 

10. (a) The focus of the parabola $x^2 = -8y$ is $(0, -2)$.
    (b) First we write the equation $7x^2 + 16y^2 = 112$ as $\frac{x^2}{4^2} + \frac{y^2}{7} = 1$. We can see that we have $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ with $a = 4$ and $b = \sqrt{7}$. Therefore $c = \sqrt{a^2 - b^2} = \sqrt{16-7} = 3$. The foci are at $(\pm 3, 0)$.