(1) $2x^2 - 4x + 2 = 0$

$x^2 - 2x + 1 = 0$

$\Delta/4 = 1 - 1 = 0 \rightarrow$ 1 solution

$x = 1$

$2(1) - 4(1) + 2 = 0$ ✓

(2) $-\frac{x}{2} \leq -3$

$\frac{x}{2} \geq 3 \rightarrow x \geq 6$

$-\frac{6}{2} = -3$ ✓

(5) $e^{x+y} = e^x \cdot e^y$ ✓

(6) $(e^x)^2 = e^{x^2}$ X

(7) $\forall x, y \in \mathbb{R}^* - \{0\}$

$\ln\left[\frac{x}{y}\right] = -\ln\left[\frac{y}{x}\right]$

LHS: $\ln\left(\frac{x}{y}\right) = \ln\left[\left(\frac{y}{x}\right)^{-1}\right] = -\ln\left(\frac{y}{x}\right)$

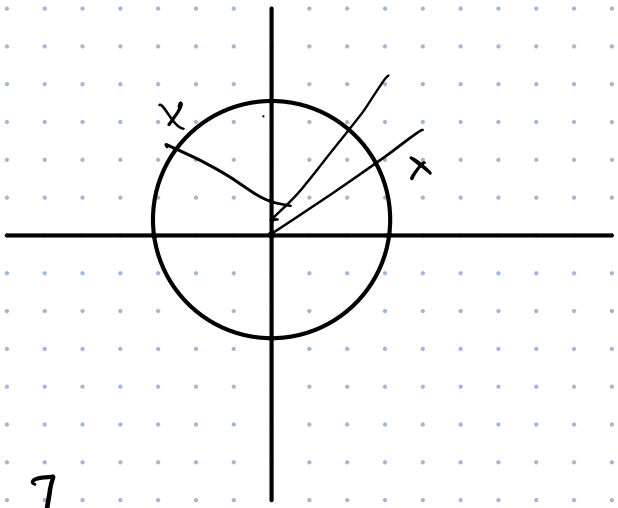
with $y \neq 0$

(10) $\cos(x) =$] same

$\cos(\pi - x) =$

$\cos(2\pi - x) =$] same

$\cos(-x) =$



(11) $\operatorname{sen}(\theta) = -\frac{1}{2}, [\pi, 2\pi]$

$\theta = \frac{1}{6}[12\pi - \pi] = 2\pi - \frac{\pi}{6} = \frac{12\pi - \pi}{6} = \frac{11}{6}\pi$

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