MP 20/10/14 ①

1) DEF. OBOR

a) $y = \frac{x^2}{x+1}$

b) $y = \ln(x+3)$

c) $y = \sqrt{5-2x}$

e) $y = \ln \frac{3x+x^2}{x-1}$

f) $y = \frac{\sqrt[3]{x+2}}{\ln(\cos x)}$

ch) $y = \sqrt{\frac{x-2}{x+2}} + \sqrt{\frac{1-x}{1+x}}$

j) $y = \log(1 - \log(x^2 - 5x + 16))$

k) $\sqrt{\sin\sqrt{x}}$

l) $y = \log_2 \log_3 \log_4 x$

o) $y = \sqrt{\cos x^2}$

n) $y = \sqrt[4]{\ln \lg x}$

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1a) $D(f) = \mathbb{R} \setminus \{-1\}$

b) $D(f) = (-3, \infty)$

c) $D(f) = (-\infty, \frac{5}{2})$

e) $(-\infty; 0) \cup (1,3)$

f) $\bigcup_{k \in \mathbb{Z}} \left(-\frac{\pi}{2} + 2k\pi\right)$

ch) $D(f) = \emptyset$

j) $D(f) = (2,3)$

k) $= \bigcup_{k=\mathbb{N}_0} (4\pi^2k^2 ; 4\pi^2k^2 + 4\pi)$

l) $D(f) = (4, \infty)$

o)

n)

2. ОБОР НОЛОТ $x \in \langle 0, 5 \rangle$

a) $y = \sqrt{2 + x - x^2}$ $H(f) = \langle 0, \frac{3}{2} \rangle$

b) $y = \ln(1 - 2\cos x)$ $H(f) = (-\infty, \ln 3)$

DZ) $y = |1 - x|$ $H(f) = \langle 0, 4 \rangle$

h) $y = \frac{x^2 + 2x - 2}{x^2 - x + 1}$ $H(f) = \langle -2, 2 \rangle$

ch) $y = \log(5 - 4x - x^2)$

i) $y = 1 - 2\cos 3x$; $H(f) = \langle -1, 3 \rangle$

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3. INVERZNI FCE

A) $y = x^2 - 2x$ $x \in (-\infty, 1)$

b) $y = \frac{1 - x}{1 + x}$ $x \neq -1 \Rightarrow x \neq \frac{1 - y}{1 + y}$ $x \neq -1$

c) $y = 2\sin 3x$ $x \in \langle \frac{-\pi}{6}, \frac{\pi}{6} \rangle$

D) $y = 2\sin 3x$ $x \in \langle \frac{\pi}{6}, \frac{\pi}{2} \rangle$

g) $y = 2^x$ $x \in [4, \infty) \Rightarrow x = \log_2 y$; $y \in \langle 4, \infty)$

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$x \in (-2, \infty)$

d) $y = 1 + \log(x + 2)$