Nr. 1)

a) $u(x) = 2x$; $v(x) = 5x$

$u(v(x)) = 2 \cdot (5x) = 10x$

$v(u(x)) = 5(2x) = 10x$

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b) $u(x) = 3x$; $v(x) = (x-1)$

$u(v(x)) = 3 \cdot (x-1) = 3x - 3$

$v(u(x)) = (3x-1) = 3x - 1$

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c) $u(x) = x^2$; $v(x) = -3x$

$u(v(x)) = (-3x)^2 = 9x^2$

$v(u(x)) = -3(x^2) = -3x^2$

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d) $u(x) = \sin(x)$; $v(x) = 2x - 1$

$u(v(x)) = \sin(2x-1)$

$v(u(x)) = 2 \cdot (\sin(x)) - 1 = 2 \cdot \sin(x) - 1$

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e) $u(x) = \sqrt{x}$; $v(x) = x^2$

$u(v(x)) = \sqrt{x^2} = |x|$; $x \in \mathbb{R}$

$v(u(x)) = (\sqrt{x})^2 = x$; $x \in \mathbb{R}_0^+$

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f) $u(x) = \frac{2}{x}$; $v(x) = x - 1$

$u(v(x)) = \frac{2}{x-1}$; $x \in \mathbb{R} \setminus \{1\}$

$v(u(x)) = \frac{2}{x} - 1$; $x \in \mathbb{R} \setminus \{0\}$