Date:

NIS : 11800425 Rombel : RPL X1-1

Nama : Risa Nurhanipah Rayon : Wikrama 5

3) Dik $f(x) = 2x - 1$

$g(x) = x^2 - 3x$

$x = 4$ ton

$f(x) = 2x - 1$

$= 2(4) - 1$

$= 8 - 1 = 7$ //

4) 7 ton x 1000 = 7000 kg

7000 / 2,5 = 28000 rim //

5) $f(x) = 3x^2 + 4$

$g(x) = 10 - 2x$

$(f \circ g)(x) = f(g(x))$

$= f(10 - 2x)$

$= 3(10 - 2x)^2 + 4$

$= 3(4x^2 - 40x + 100) + 4$

$= 12x^2 - 120x + 300 + 4$

$= 12x^2 - 120x + 304$

$(f \circ g)(1) = 12(1)^2 - 120(1) + 304$

$= 196$ //

6) Dik : $g(x) = 2x^2 - 1$

$(g \circ f)(x) = 2x^2 + 12x + 17$

$(g \circ f)(x) = 2x^2 + 12x + 17$

$g(f(x)) = 2x^2 + 12x + 17$

$2(f(x))^2 - 1 = 2x^2 + 12x + 17$

$2(f(x))^2 = 2x^2 + 12x + 17 + 1$

Date:

$2(f(x))^2 = 2x^2 + 12x + 18$

$(f(x))^2 = \frac{2(x^2 + 12x + 18)}{2}$

$(f(x))^2 = x^2 + 6x + 9$

$(f(x))^2 = (x+3)^2$

$f(x) = x + 3$ //

7) $f(x) = \frac{3 - x}{2x + 4}$

$y = \frac{3 - x}{2x + 4}$

$= \frac{-4x + 3}{2x + 1}$

$= \frac{-4(3) + 3}{2(3) + 1}$

$= \frac{-12 + 3}{6 + 1} = -\frac{9}{7}$ //

8) $f(x) = 3 - 6(2x - 1)$

$f(x) = 3 - 6(2x - 1)$

$y = 3 - 12x + 6$

$y - 6 - 3 = -12x$

$y - 9 = -12x$

$\frac{y - 9}{12} = x$

$f^{-1}(x) = \frac{x - 9}{-12}$

$f^{-1}(-3) = \frac{-3 - 9}{-12} = \frac{-12}{-12} = 1$ //

Date:

9) $(f \circ g)^{-1}(-2)$ dari $f(x) = \frac{2x+3}{1-x}$; $x \neq 1$, $g(x) = x+2$

$(fog)(x) = f(g(x))$

$= f(x+2)$

$= \frac{2(x+2)+3}{1-(x+2)}$

$= \frac{2x+4+3}{-x+7}$

$= \frac{2x+7}{-x+2}$

$y = \frac{2x+7}{-x+2}$

$2x+7 = y(-x+2)$

$2x+7 = -7+2y$

$x = -7+2y$

$x = \frac{-7+2y}{2-1y}$

~~$(f \circ g)^{-1} y = \frac{2x+7}{-x+2}$~~

$(f \circ g)^{-1} x = \frac{2(-2)+7+2}{-2} = \frac{-4+9}{-2} = \frac{5}{-2}$

$= -2{,}5$ / tak terdefinisi

10) $f^{-1}(4)$ $f(x) = (2x+8)^2$

$1 = y(2x+8)^2$

$\sqrt{y} = \sqrt{(2x+8)^2}$

$(\sqrt{y}) - 8 = 2x$

$\frac{(\sqrt{y}-8)}{2} = x$

$f^{-1}(2) = \frac{\sqrt{x}-8}{2}$

$= \frac{\sqrt{4^2}-8}{2}$

$= \frac{2-8}{2} = \frac{-6}{2} = -3$ //

11) $(f \circ (g \circ h))(-1) =$

$f(x) = x^2$

$g(x) = x-3$

$h(x) = 5x$

$\rightarrow f \circ (g \circ h)(x) = f(g \circ h)(x))$

$= f(5x-3)$

$= (5x-3)^2$

$= (5x-3)(5x-3)$

$= 25x^2 - 15x - 15 + 9$

$= 25x^2 - 30x + 9$

$= 25(-1)^2 - 30(-1) + 9$

$= 14$ //