

PENDALAMAN ATS GENAP

KELAS XI

Sebuah pabrik gula melakukan produksi melalui 2 tahap. Tahap pertama menggunakan mesin 1 yang menghasilkan ekstra tebu. Tahap kedua dengan menggunakan mesin 2 yang menghasilkan gula. Dalam produksinya mesin 1 menggunakan fungsi $f(x)=4x+21$ dan mesin 2 menggunakan fungsi $g(x)=x-5$, dengan x merupakan bahan dasar tebu dalam jumlah ton. Jika tebu yang tersedia ada 4 ton maka gula yang dihasilkan sebanyak... ton

$f(x) = \dots \dots \dots$	$fog(x) = 4 (\dots \dots \dots) + 21$
$g(x) = \dots \dots \dots$	$fog(x) = 4x - \dots \dots \dots + 21$
$fog(4) = \dots \dots \dots ???$	$fog(x) = 4x \dots \dots \dots$
$fog(x) = f(g(x))$	$fog(4) = 4(\dots \dots \dots) + \dots \dots \dots$
$fog(x) = 4 g(x) + 21$	$fog(4) = \dots \dots \dots + \dots \dots \dots$
	$fog(4) = \dots \dots \dots \dots \dots$

Jika diketahui $f(x) = x^2$ da $g(x) = 2x - 6$ maka $(fog)(-1) = \dots$

$f(x) = \dots \dots \dots$	$fog(x) = (\dots \dots \dots)^2$
$g(x) = \dots \dots \dots$	$fog(-1) = (2(\dots \dots \dots) - 6)^2$
$fog(-1) = \dots \dots \dots ???$	$fog(-1) = (\dots \dots \dots - \dots \dots \dots)^2$
$fog(x) = f(g(x))$	$fog(-1) = (\dots \dots \dots \dots)^2$
$fog(x) = (\dots \dots \dots)^2$	$fog(-1) = \dots \dots \dots \dots \dots$

Fungsi invers dari $f(x) = 4 - 2x$ adalah...

$y = f(x)$	$2x = 4 - \dots\dots\dots$	$f^{-1}(x) = \frac{\dots\dots\dots - x}{\dots\dots\dots}$
$y = \dots\dots\dots$	$x = \frac{4 - \dots\dots\dots}{\dots\dots\dots}$	

Jika $f(x) = 12 + 6x$ maka $f^{-1}(6)$ adalah

$y = f(x)$	$y - \dots\dots\dots = 6x$	$f^{-1}(x) = \frac{x - \dots\dots\dots}{6}$
$y = \dots\dots\dots$	$\frac{y - \dots\dots\dots}{\dots\dots\dots} = x$	$f^{-1}(6) = \frac{\dots\dots - 12}{6}$
		$f^{-1}(6) = \dots\dots\dots$

Fungsi invers $f(x) = (x+3)^2$ adalah

$y = f(x)$	$\sqrt{y} = \dots\dots\dots$
$y = (\dots\dots\dots)^2$	$\sqrt{y} - \dots\dots\dots = x$
Kedua ruas di akarkan	$f^{-1}(x) = \sqrt{y} - \dots\dots\dots$
$\sqrt{y} = \sqrt{(\dots\dots\dots)^2}$	

Jika $f(x) = 2x^2 - 5$ maka nilai $f^{-1}(3) = \dots\dots\dots$

$y = f(x)$	$f^{-1}(x) = \sqrt{\frac{x + \dots\dots\dots}{\dots\dots\dots}}$
$y = \dots\dots\dots x^2 - 5$	$f^{-1}(3) = \sqrt{\frac{\dots\dots\dots + 5}{\dots\dots\dots}}$
$y + \dots\dots\dots = \dots\dots\dots x^2$	$f^{-1}(3) = \sqrt{\dots\dots\dots} = \dots\dots\dots$
$\frac{y + \dots\dots\dots}{\dots\dots\dots} = x^2$	
$\sqrt{\frac{y + \dots\dots\dots}{\dots\dots\dots}} = x$	

Fungsi invers dari $f(x) = \sqrt{3x+1}$ adalah

$y = f(x)$	$y^2 - \dots = 3x$
$y = \sqrt{\dots}$	$\frac{y^2 - \dots}{3} = x$
Kedua ruas dikuadratkan	$f^{-1}(x) = \frac{x^2 - \dots}{\dots}$
$y^2 = (\sqrt{\dots})^2$	
$y^2 = \dots$	

Jika diketahui $f(x) = 2\sqrt{x-3}$ maka nilai $f^{-1}(4) =$

$y = f(x)$	$\frac{y^2 + \dots}{\dots} = x$
$y = 2\sqrt{\dots}$	$f^{-1}(x) = \frac{x^2 + \dots}{\dots}$
Kedua ruas dikuadratkan	$f^{-1}(4) = \frac{\dots^2 + \dots}{\dots}$
$y^2 = 2^2(\sqrt{\dots})^2$	$f^{-1}(4) = \frac{\dots + \dots}{\dots}$
$y^2 = \dots(x-3)$	$f^{-1}(4) = \frac{\dots}{\dots} = \dots$
$y^2 = \dots x - \dots$	
$y^2 + \dots = 4x$	

Fungsi invers dari $f(x) = \frac{5x-2}{6-4x}$ adalah

$y = f(x)$	$\dots y + 2 = (5 + \dots y)x$
$y = \frac{5x-2}{6-4x}$	$\frac{\dots y + 2}{5 + \dots y} = x$
$y(\dots) = 5x - 2$	$f^{-1}(x) = \frac{\dots x + 2}{5 + 4x}$
$\dots y - \dots xy = 5x - 2$	
$\dots y + 2 = 5x + \dots xy$	

Jika $f(x) = \frac{3x-4}{x+5}$ maka $f^{-1}(2)$ adalah

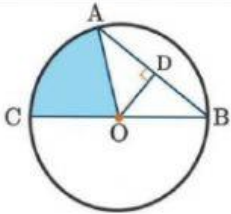
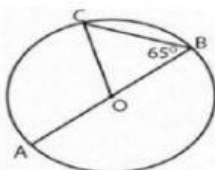
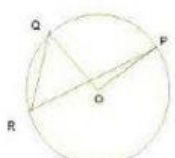
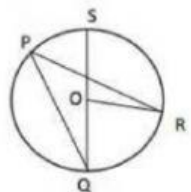
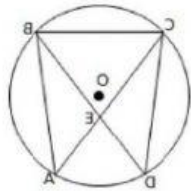
$y = f(x)$ $y = \frac{3x-4}{x+5}$ $y(\dots\dots\dots) = 3x-4$ $\dots\dots y - \dots\dots x = 3x-4$ $\dots\dots\dots y - 3x = -4 - \dots\dots\dots y$	$x(y - \dots\dots\dots) = -4 - \dots\dots\dots y$ $x = \frac{-\dots\dots\dots - \dots\dots\dots y}{y - \dots\dots\dots}$ $f^{-1}(x) = \frac{-\dots\dots\dots - \dots\dots\dots y}{y - \dots\dots\dots}$ $f^{-1}(2) = \frac{-4 + 5(\dots\dots\dots)}{\dots\dots\dots - 3}$ $f^{-1}(2) = \frac{-\dots\dots\dots}{-1} = \dots\dots\dots$
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Jika diketahui $f(x) = 4x$ dan $g(x) = 2x+10$ maka $(g \circ f)^{-1}(x) = \dots$

$g \circ f(x) = 2g(x) + \dots\dots\dots$ $g \circ f(x) = 2(\dots\dots) + \dots$ $g \circ f(x) = \dots\dots x + 10$ $y = g \circ f(x)$ $y = 8x + \dots\dots$	$y - \dots\dots = 8x$ $\frac{y - \dots\dots}{8} = x$ $(g \circ f)^{-1}(x) = \frac{x - \dots}{8}$
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Jika diketahui $f(x) = 4-6x$ dan $g(x) = 2x$ maka $(f \circ g)^{-1}(16) = \dots$

$f \circ g(x) = \dots\dots - 6g(x)$ $f \circ g(x) = \dots\dots - 6(\dots\dots)$ $f \circ g(x) = \dots\dots - \dots\dots x$ $y = f \circ g(x)$ $y = \dots\dots - 12x$	$12x = 4 - \dots$ $x = \frac{4 - \dots\dots\dots}{12}$ $(f \circ g)^{-1}(x) = \frac{4 - \dots\dots}{12}$ $(f \circ g)^{-1}(16) = \frac{4 - \dots\dots}{12} = \frac{\dots\dots\dots}{12}$ $= \dots\dots\dots$
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	$OC = OB = OA = \dots\dots\dots$ $CB = \dots\dots\dots$ $OD = \dots\dots\dots$ $AB = \dots\dots\dots$ $COA = \text{berwarna biru} = \dots\dots\dots$
Besar sudut AOC adalah 	Sudut CBO = sudut keliling = 65° sudut AOC = sudut pusat = 2 sudut keliling sudut AOC = $2 (\dots\dots\dots)^{\circ} = \dots\dots\dots^{\circ}$
Sudut PRQ = 45° maka sudut POQ = ...? 	Sudut PRQ = sudut keliling = 45° sudut POQ = sudut pusat = 2 sudut keliling sudut POQ = $2 (\dots\dots\dots)^{\circ} = \dots\dots\dots^{\circ}$
Jika sudut ROS = 100° maka sudut RPQ adalah... 	sudut ROS = sudut pusat = 100° sudut RPQ = sudut keliling = $\dots\dots\dots^{\circ}$ sudut RPQ = $\frac{1}{2}(\text{sudut pusat})$ sudut RPQ = $\frac{1}{2}(\dots\dots\dots) = \dots\dots\dots$
Jika sudut BEC = 80° dan sudut BAC = 65° maka besar sudut ACD adalah... 	sudut BEC = 80° sudut BAC = 65° sudut BDC = busur sama dengan sudut BAC = $\dots\dots\dots^{\circ}$ Sudut CED = $180^{\circ} - \text{sudut BEC}$ $= 180^{\circ} - \dots\dots\dots^{\circ} = \dots\dots\dots^{\circ}$ Sudut ACD = $180^{\circ} - \text{sudut BDC} - \text{sudut CED}$ $= 180^{\circ} - \dots\dots\dots^{\circ} - \dots\dots\dots^{\circ} = \dots\dots\dots^{\circ}$