

November 9, 2015  
 \* Quiz Wednesday  
 \* Long Division  
 \* Plus a Check  
 $P(x) = D(x) \cdot q(x) + R(x)$   
 \* Synthetic Division

Nov 9-11:02 AM

$f(x) = \frac{1}{1-x}$   
 Show  $f(f(f(x))) = x$

$$\frac{1}{1 - \left(\frac{1}{1-x}\right)}$$

$$\frac{1}{1 - \left(\frac{1}{1 - \left(\frac{1}{1-x}\right)}\right)}$$

$$\frac{1}{1 - \left(\frac{1}{1 - \left(\frac{1}{1-x}\right)}\right)}$$

Nov 9-11:07 AM

$2x^3 - 7x^2 + 5 \div x - 3$

	$2x^2$	$-x$	$-3$
$x-3$	$2x^3$	$-7x^2$	$+0x$
	$-2x^3$	$+6x^2$	$-6x$
	$0$	$-x$	$+0x$
		$+x$	$+3x$
		$0$	$-3x$
			$+5$
			$-3x$
			$+8$
			$0$

$P(x) = D(x) \cdot q(x) + R(x)$   
 $2x^3 - 7x^2 + 5 = (x-3) \cdot (2x^2 - x - 3) + (-4)$   
 $= 2x^3 - x^2 - 3x - 6x^2 + 9x + 11 - 4$   
 $= 2x^3 - 7x^2 + 5$

Nov 9-11:13 AM

$x-3 \mid 2x^3 - 7x^2 + 0x - 5$

3	2	-7	0	5
	6	-3	-9	
	2	-1	-3	-4

$2x^2 - x - 3$   
 $\frac{-4}{x-3}$

Nov 9-11:35 AM

$$\frac{x^3 - x^2 - 2x + 6}{x-2}$$

Nov 9-11:42 AM