

April 1, 2016

$$\frac{19 \text{ Dividend}}{4 \text{ Divisor}} = 4 \text{ Quotient}$$

$$4 \overline{) 19} \quad \text{ans.: } 4 \frac{3}{4}$$

3 remainder

Ch

$$\frac{(4 \cdot 4) + 3}{4} = \frac{16 + 3}{4} = \frac{19}{4}$$

Apr 1-11:03 AM

Division Algorithm

$$P(x) = D(x) \cdot Q(x) + R(x)$$

Dividend    Divisor    Quotient    Remainder

$$19 = (4 \cdot 4) + 3$$

Apr 1-11:10 AM

$$\frac{8x^4 - 12x^3 + 2x^2 - 20}{2x}$$

$$2x$$

$$\frac{8x^4}{2x} - \frac{12x^3}{2x} + \frac{2x^2}{2x} - \frac{20}{2x}$$

$$4x^3 - 6x^2 + x - \frac{10}{x}$$

Apr 1-11:16 AM

$$\frac{-15x^3}{2x} = -\frac{15x^2}{2}$$

$$= -\frac{15}{2}x^2$$

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$6x^2 - 26x + 12$  Dividend

$x - 4$  Divisor

	$x^2$	$x^1$	$x^0$
$x-4$	$6x$	$-2$	
$\oplus$	$6x^2$	$-26x$	$+12$
$\ominus$	$6x^2$	$+24x$	$\downarrow$
$\oplus$	$\ominus$	$-2x$	$+12$
$\oplus$	$\ominus$	$+2x$	$+8$
$\oplus$	$\ominus$	$\oplus$	$4 \leftarrow R(x)$

ans.:  $Q(x) = 6x - 2$

- ①  $\frac{6x^2}{x} = 6x^1$
- ②  $6x \cdot x = 6x^2$
- ③  $(-4) \cdot 6x = -24x$
- ④  $\frac{-2x}{x} = -2x^0$
- ⑤  $(-2) \cdot x = -2x$
- ⑥  $(-4) \cdot (-2) = 8$

Apr 1-11:19 AM

$$\frac{P(x) = 8x^4 - 22x^3 + 4x^2 - 2x + 8}{D(x) = 2x - 6}$$

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