

Stick Quiz



1. State the degree of $6xy^2 - 12x^3y^2 + y^4 - 26$.

Simplify using operations of polynomials.

2. $(10a^2 - 6ab + b^2) - (5a^2 - 2b^2)$

$$5a^2 - 6ab + 3b^2$$

3. $7w^{-1}(2w^2z^3 + 8w - 5z)$

$$14wz^3 + 56 - 35wz$$

4. $2m(7n^2p^{-2})(-p^{-4}n^5)$

$$\frac{-14mn^7}{p^6}$$

Do you really understand?

Try this:



$$w^{41} = w^{4k} w^5$$

$$41 = 4k + 5$$

$$14wz^3 - \frac{35z}{w} + 56$$

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$$2m(7n^2p^{-2})(-p^{-4}n^5)$$

$$\frac{-1x^2}{(-1x)^2}$$

$$2 \cdot 7 \cdot (-1) m p^{-2} p^{-4} n^5 n^2$$

$$\underline{\underline{-14m p^{-6} n^7}}$$

$$\frac{-14mn^7}{p^6}$$

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Stick Quiz

Use synthetic division to factor the following polynomials.

1. $(x^4 + 3x^3 - 3x + 3) \div (x + 2) =$
 $x^3 + x^2 - 2x + 1 + \frac{1}{x+2}$

2. $(6y^3 - 17y^2 + 6y + 8)(3y - 4)^1 =$

3. $5 \overline{)1465}$ 293

4. $3 \overline{)1465}$ 488 $\frac{1}{3}$ 1 1 4 6

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2. $(6y^3 - 17y^2 + 6y + 8)(3y - 4)^1 =$ When done \div by 3..

$\frac{4}{3}$	6	-17	6	8
+	↓	8	-12	-8
	$\frac{6}{3}$	$-\frac{9}{3}$	$-\frac{6}{3}$	0
$\frac{4}{3} \cdot 2$	$(2y^2 - 3y - 2)$			

$$\begin{aligned}
 3y - 4 &= 0 \\
 +4 & \quad +4 \\
 \hline
 3y &= 4 \\
 \frac{3y}{3} &= \frac{4}{3} \\
 y &= \frac{4}{3}
 \end{aligned}$$

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Verify:

$$(3y - 4)(2y^2 - 3y - 2)$$

$$6y^3 - 9y^2 - 6y - 8y^2 + 12y + 8$$

$$6y^3 - 17y^2 + 6y + 8$$

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LESSON 5-2 Dividing Polynomials

I can perform long and synthetic division on polynomial expressions.

Part 2: Long Division

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$$\begin{array}{r}
 488\frac{1}{3} \\
 \hline
 3 \overline{) 1465} \\
 \underline{12} \downarrow \\
 26 \\
 \underline{24} \\
 25 \\
 \underline{24} \\
 \textcircled{1}
 \end{array}$$

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$$\begin{array}{r}
 2054\frac{26}{31} \\
 \hline
 31 \overline{) 63700} \\
 \underline{62} \downarrow \\
 17 \downarrow \\
 \underline{0} \downarrow \\
 170 \downarrow \\
 \underline{155} \downarrow \\
 150 \\
 \underline{124} \\
 26
 \end{array}$$

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5.2 Dividing Polynomials

Simplify
$$\frac{5a^2b - 15ab^3 + 10a^3b^4}{5ab}$$

Since there is no + -
give all parts C.D.

$$\frac{\cancel{5}a^2\cancel{b}}{\cancel{5}\cancel{a}\cancel{b}} - \frac{\cancel{15}\cancel{a}\cancel{b}^3}{\cancel{5}\cancel{a}\cancel{b}} + \frac{\cancel{10}a^3\cancel{b}^4}{\cancel{5}\cancel{a}\cancel{b}}$$

$$a - 3b^2 + 2a^2b^3$$

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Simplify
$$\frac{3x^2y + 6x^5y^2 - 9x^7y^3}{3x^2y}$$

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Use long division to find $(x^2 - 2x - 15) \div (x - 5)$.

$$\begin{array}{r} x + 3 \\ x - 5 \overline{) x^2 - 2x - 15} \\ \underline{+(x^2 + 5x)} \\ 3x - 15 \\ \underline{+(3x + 15)} \\ 0 \end{array}$$

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

$(x-5)(x+3)$
 $x^2 + 3x - 5x - 15$
 $x^2 - 2x - 15 \checkmark$

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$(x^3 - 8x^2 + 4x - 9) \div (x - 4) =$

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$$\begin{array}{r} x^2 - 4x - 12 - \frac{57}{x-4} \\ x - 4 \overline{) x^3 - 8x^2 + 4x - 9} \\ \underline{+(x^3 + 4x^2)} \\ -4x^2 + 4x \\ \underline{+(4x^2 + 16x)} \\ -12x - 9 \\ \underline{+(12x + 48)} \\ -57 \end{array}$$

$\frac{x^3}{x} = x^2$
 $\frac{-4x^2}{x} = -4x$
 $\frac{-12x}{x} = -12$

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Use long division to find $(x^2 + 5x + 6) \div (x + 3)$.

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$$\begin{array}{r}
 x^2 \\
 \hline
 x \\
 \hline
 2x \\
 \hline
 x = 2
 \end{array}
 \qquad
 \begin{array}{r}
 x+2 \\
 \hline
 x+3 \overline{) x^2 + 5x + 6} \\
 \underline{+(x^2 + 3x)} \\
 2x + 6 \\
 \underline{-(2x + 6)} \\
 0
 \end{array}$$

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$$(x^4 + 3x^3 + 0x^2 - 3x + 3) \div (x + 2) =$$

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$$\begin{array}{r}
 x^3 + x^2 - 2x + 1 + \frac{1}{x+2} \\
 \hline
 x+2 \overline{) x^4 + 3x^3 + 0x^2 - 3x + 3} \\
 \underline{+(x^4 + 2x^3)} \\
 x^3 + 0x^2 \\
 \underline{+(x^3 + 2x^2)} \\
 -2x^2 - 3x + 3 \\
 \underline{+(4x^2 + 4x)} \\
 x + 3 \\
 \underline{+(x + 2)} \\
 1
 \end{array}$$

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$$(x^4 + 5x^3 + 3x^2 - 3x + 18)(x + 3)^1 =$$

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Homework

5.2 Part 2

Pg 315 #21-31o, 37-41o

Yes, they are the same, use long division!

Dec 13-7:14 AM

Attachments



Projectile Motion

Screen Capture(5).galleryitem