

October 19, 2015
 * Exam #2 - Wed
 October 28

Oct 19-1:15 PM

Factoring → Polynomials
 ↓
 The Reverse of Multiplication
 factor of the form $ax^2 + bx + c$

Oct 19-1:26 PM

Greatest Common **Factor**
 6.1 →
 $GCF(a, b)$
 ↓
 Division

Oct 19-1:29 PM

36 48

$\begin{matrix} 36 \\ \swarrow \searrow \\ 2 \cdot 18 \\ \swarrow \searrow \\ 2 \cdot 9 \\ \swarrow \searrow \\ 3 \cdot 3 \end{matrix}$

 $\begin{matrix} 48 \\ \swarrow \searrow \\ 2 \cdot 24 \\ \swarrow \searrow \\ 2 \cdot 12 \\ \swarrow \searrow \\ 2 \cdot 6 \\ \swarrow \searrow \\ 2 \cdot 3 \end{matrix}$

$36 = 2 \cdot 2 \cdot 3 \cdot 3$
 $48 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 3$

$GCF(36, 48) = 12$
 Ok
 $\frac{36}{12} = 3$
 $\frac{48}{12} = 4$
 $GCF(3, 4) = 1$
 Relatively Prime

Oct 19-1:31 PM

36 90

$\begin{matrix} 36 \\ \swarrow \searrow \\ 2 \cdot 18 \\ \swarrow \searrow \\ 2 \cdot 9 \\ \swarrow \searrow \\ 3 \cdot 3 \end{matrix}$

 $\begin{matrix} 90 \\ \swarrow \searrow \\ 3 \cdot 45 \\ \swarrow \searrow \\ 3 \cdot 15 \\ \swarrow \searrow \\ 3 \cdot 5 \end{matrix}$

$36 = 2 \cdot 2 \cdot 3 \cdot 3$
 $90 = 2 \cdot 3 \cdot 3 \cdot 5$

$GCF(36, 90) = 18$
 * $GCF(2, 5) = 1$ ✓

Oct 19-1:38 PM

15, 25, 27
 $GCF(15, 25, 27) = 1$

Oct 19-1:49 PM

$$x^2, x^5, x^7$$

$$GCF(x^2, x^5, x^7) = x^2$$

$$\frac{x^2}{x^2} = 1, \frac{x^5}{x^2} = x^3, \frac{x^7}{x^2} = x^5$$

Ok

$$GCF(x^2, x^5) = 1$$

Oct 19-1:53 PM

$$6y^4, 2y$$

$$GCF(6y^4, 2y) = 2y$$

$$GCF(3y^3, 1) = 1$$

$$6y^4 = 2 \cdot 3 \cdot y \cdot y \cdot y \cdot y$$

$$2y = 2 \cdot y$$

Oct 19-1:57 PM

$$ab + ac = a(b+c)$$

R.P

$$GCF(a, ac) = a$$

$$GCF(a, c) = 1$$

Oct 19-2:02 PM

$$8x^4 + 24x^3$$

$$GCF = 8x^3$$

$$8x^3(x+3)$$

R.P

$$\frac{24x^3}{8x^3} = 3$$

$$8x^4 = 2 \cdot 2 \cdot 2 \cdot x \cdot x \cdot x \cdot x$$

$$24x^3 = 2 \cdot 2 \cdot 2 \cdot 3 \cdot x \cdot x \cdot x = 8x^3 \cdot 3$$

Oct 19-2:04 PM

$$9a^5b^6c^3 - 27a''b^7c^3$$

$$9a^5b^6c^3(1 - 3a''bc)$$

$$a^5 = a \cdot a \cdot a \cdot a \cdot a$$

$$a'' = a \cdot a \cdot a \cdot a \cdot a \cdot a \cdot a \cdot a \cdot a \cdot a$$

Oct 19-2:11 PM

$$ab - ac = a(b-c)$$

$$8x^2 - 14x$$

$$2x(4x-7)$$

$$8x^2 - 14x$$

Oct 19-2:13 PM

$$36y^3 - 12y^2 + 6y$$

$$6y(6y^2 - 2y + 1)$$

Oct 19-2:31 PM

Read & Do 6.1 #1-68
m3

Factoring by Grouping

$$\left[\begin{array}{c} x^2 + 2x \\ \text{HCF} = x \end{array} \right] \left[\begin{array}{c} 5x + 10 \\ \text{HCF} = 5 \end{array} \right]$$

$$x(x+2) + 5(x+2)$$

$$\text{HCF} = (x+2)$$

$$(x+2)(x+5)$$

R.P. ✓ R.P. ✓

Oct 19-2:36 PM

$$5x + 15 + xy + 3y$$

Oct 19-2:44 PM