

Welcome to Mrs. Hagen's  
Pre-Calculus class

Please walk to the front corner of the room  
and grab a yellow starter.

Aug 22-11:59 AM

- Aug 22
- Starter 1
  - Calculator
  - Disclosure/website
  - Pre-Test
  - Factor Review

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website: [www.chhshagenmath.weebly.com](http://www.chhshagenmath.weebly.com)

- Click on the name of your class at the top
- Read the disclosure
- Click the disclosure signature button
- Fill out the information and submit

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You can buy one new, or used on KSL, or rent one.

Pay in the main office \$20 and bring me the receipt. These are limited and I will run out in a couple of days.

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Pre-Test

This does not count on your grade.  
Participation only.

**DO NOT GUESS**

If you don't know, select I don't know.

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Factor Review

Greatest Common Factor: GCF

- taking out everything that's common

- has to be part of each term

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EX)  $4x+16$      $\textcircled{4}x + \textcircled{4}4$   
 $4(x+4)$

EX2)  $x^2+x$   
 $x(x+1)$

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$\textcircled{1} 3x^2+21x+30$   
 $3(x^2+7x+10)$

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$\textcircled{2} x^3+8x^2+7x$   
 $x(x^2+8x+7)$   
 $a=1 \quad b=8 \quad c=7$      $\begin{array}{c} 7 \\ \times \\ 1 \end{array}$

$x(x+1)(x+7)$

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X-man/Special X-man/Garbage Method

$3(x^2+7x+10)$   
 $a=1 \quad b=7 \quad c=10$      $\begin{array}{c} 10 \\ \times \\ 1 \end{array}$

$3(x+5)(x+2)$      $\begin{array}{c} 5 \\ \times \\ 2 \\ \hline 10 \\ 7 \end{array}$

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$\textcircled{14} 2n^2-5n-3$      $\begin{array}{c} -6 \\ \times \\ -5 \end{array}$      $\begin{array}{c} -6 \\ \times \\ +1 \end{array}$

$a=2 \quad b=-5 \quad c=-3$

$(2n - \frac{3}{2})(2n + 1)$

take out the trash

$(n-3)(2n+1)$

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$(n-3)(2n+1)$

belly button  $-5n$   
 outty  $+n$   
 inny  $-6n$   
 $-5n$

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(16)  $4r^2 - 12r + 9$   $\begin{matrix} 3/6 \\ -6 & -6 \\ -12 \end{matrix}$

$a=4 \quad b=-12 \quad c=9$

$(\frac{4r}{2} - \frac{6}{2})(\frac{4r}{2} - \frac{6}{2})$

$(2r-3)(2r-3)$

$(2r-3)^2$

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Difference of Squares

(18)  $25x^2 - 9$   $\sqrt{25x^2 - 9}$

$25x^2 - 0x - 9$   $\begin{matrix} -225 \\ +15 & -15 \\ 0 \end{matrix}$   $(5x+3)(5x-3)$

$(5x+15)(5x-15)$

$(5x+3)(5x-3)$

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Sum and Difference of Cubes

(25)  $125x^3 - 8$

$\sqrt[3]{125} \quad \sqrt[3]{8}$

$(5x - 2)(\frac{25x^2 + 10x + 4}{5 \cdot 5x \quad 5x^2 \quad 7 \cdot 2})$

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$a^3 + b^3 = \text{sum of cubes}$

$(a+b)(a^2 - ab + b^2)$

$a^3 - b^3 = \text{difference of cubes}$

$(a-b)(a^2 + ab + b^2)$

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(32)  $-250 - 54a^3$

$-2(125 + 27a^3)$

$\sqrt[3]{125} \quad \sqrt[3]{27}$

$5 \quad 3a$

$-2(5+3a)(25-15a+9a^2)$

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(34)  $-27x^3 - 125$

$-1(27x^3 + 125)$

$-(3x+5)(9x^2 - 15x + 25)$

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Homework:  
Factor Worksheet  
Calculator  
Disclosure

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