7.2 Common Factoring

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Expanding - 3(x+4) = 3x +12

Factoring - 3x -15 = 3(x - 5)

Factoring is the opposite of expanding.

GCF - Greatest Common Factor - the largest number that will divide into each co-efficient.

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Examples Factor each of the following

1) ab + ac

$\frac{ab}{a} \quad \frac{ac}{a}$ $\quad a(b+c)$

2) 5x + 10

$\frac{5x}{5} \quad \frac{10}{5}$ $\quad 5(x+2)$

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3) 8a + 4

$\frac{8a}{4} + \frac{4}{4}$ so $4(2a+1)$

$8a + 4 = 4(2a + 1)$

4) $5x^2 - 15x$ or $5xx - 15x$

so $5x(x - 3)$

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5) - 5x + 25

$\frac{-5x}{5} + \frac{25}{5}$

$5(-x + 5)$ or $-5(x - 5)$

remember (-) x (-) = (+)

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$6x^3 + 4x^2 - 8x$

$2x$ $2x$ $2x$

$2x(3x^2+2x-4)$

$2x(3x^2 + 2x - 4)$

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Factor the area to find the length and width of the rectangle.

Find the length and the width if x = 4m

$A = 6x^2 + 3x$

A = Length x Width

A = $6x^2$ + 3x

GCF is 3x is GCF

$(3x)$ L

W $(2x+1)$

$A = 3x(2x+1)$ $\frac{6x^2}{3x} + \frac{3x}{3x}$

$A = 3x(2x + 1)$

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#1,2,3,4, 6,7,8,11,

Handout

Hand in at end of class or ZERO!!

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$4x^3 + 6x^2 + 8x$

$4xxx + 6xx + 8x$

2x divides into all three GCF

$2x(2xx) + 2x(3x) + 2x(4)$

$2x(2x^2 + 3x + 4)$

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