DO NOW

What is the percent change from 45ft to 92ft?

$$\frac{92-45}{45} \times 100$$

$$\frac{47}{45} \times 100$$

$104.\overline{4}\%$

Kris Kross

$$5x^2 - 12x + 7$$

$$\begin{array}{ccc} 5x & -7 & -7x \\ x & -1 & -5x \\ & & -12x \end{array}$$

$(5x-7)(x-1)$

$(5x-1)(x-7)$

Bustin' Da B

Multiply A and C ✓
Factor Product ✓
Bust the B ✓
Factor By Grouping

$$5x^2 - 12x + 7$$

Bust b term

$$5x^2 - 5x - 7x + 7$$

$$5x(x-1) - 7(x-1)$$

$$(5x-7)(x-1)$$

A.C

$5 \cdot 7 = 35$

$36 = 1$	35
$12 = 5$	7
$-12 = -5$	-7
$-36 = -1$	-35

$$5x^2 - 7x - 5x + 7$$

$$x(5x-7) - 1(5x-7)$$

$$(x-1)(5x-7)$$

Ex 1) $4x^2 - 8x - 5$

$4x^2 - 10x + 2x - 5$

① -20

1	-20
-1	20
-2	10
2	-10
4	-5
-4	5

$= -8$

Ex 2) $6y^2 + 5y - 14$

-84

12 | -7

$6y^2 + 12y - 7y - 14$

$6y(y+2) - 7(y+2)$

$(6y-7)(y+2)$

Ex 3) $-2b^2+11b-12$

$-1(2b^2-11b+12)$

$\frac{24}{-8|-3}$

$-1(2b^2-8b-3b+12)$

$-1(2b(b-4)-3(b-4))$

$-1(2b-3)(b-4)$ or $(-2b+3)(b-4)$ or $(2b-3)(-b+4)$

Ex 4) $-8n^2-16n-6$

$-2(\underbrace{4n^2+8n+3}_{\text{bust b with 1}})$

$\frac{12}{6|2}$

$-2(\underline{4n^2+6n}\underline{+2n+3})$

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

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

Ex 5) $2x^2+9x-18=0$ $a \cdot c = -36$

$12 \mid -3$

$2x^2+12x-3x-18=0$

$2x \qquad -3$

$(2x-3)(x+6)$

$\overset{\shortparallel}{0} \qquad \overset{\shortparallel}{0}$

$\boxed{x = 3/2, -6}$

Ex 6) $-4x^2+19x=-30$ $a \cdot c = -120$

$24 \mid -5$

$-4x^2+24x-5x+30=0$

$-4x \qquad -5$

$(-4x-5)(x-6)$

$18 \qquad \overset{\shortparallel}{0}$

$\boxed{x = -5/4, +6}$

$2x^3+15x^2-7x=0$

$x(2x^2+15x-7)=0$

$\underset{\overset{\shortparallel}{0}}{x}(2x \quad \underset{\overset{\shortparallel}{0}}{x}x \quad \underset{\overset{\shortparallel}{0}}{\quad})=0$

Homework
Pages 499-500
#20-46 even, 49 and 50, 56-61 all