

Announcements:

- Skills Test on Tues 12/16
 - Factoring/Solving polynomials
 - Working with exponents
- Unit Test (chapter 8 & 9)
Thursday 12/18

H/W Review

$$21t^2 - 6t + 7$$

not factorable

$$\frac{16x^2}{8x} - \frac{24x}{8x} = 8x(2x-3)$$

$$15y^2 + 29y + 8$$

Factors of $15y^2$

$$\begin{array}{|c|} \hline y, 15y \\ \hline 3y, 5y \\ \hline \end{array}$$

Factors of 8

$$\begin{array}{|c|} \hline 1, 8 \\ \hline 2, 4 \\ \hline \end{array}$$

possibilities

middle

$$23y$$

$$\begin{array}{l} (y+1)(15y+8) \\ \times (y+8)(15y+1) \\ \times (y+2)(15y+4) \\ \times (y+4)(15y+2) \\ \checkmark (3y+1)(5y+8) \\ \times (3y+8)(5y+1) \\ (3y+2)(5y+4) \\ (3y+4)(5y+2) \end{array}$$

$$29y$$

$$29y$$

$$(3y+1)(5y+8)$$

ANSWER

$$15a^2 - 2a - 8 = 0$$

<u>$15a^2$</u>	<u>-8</u>	<u>possibilities</u>	<u>middle</u>
<div style="border: 1px solid red; padding: 2px; display: inline-block;"> $a, 15a$ $3a, 5a$ </div>	<div style="border: 1px solid green; padding: 2px; display: inline-block;">$-1, 8$</div>	$\times (3a-1)(5a+8)$	
	<div style="border: 1px solid green; padding: 2px; display: inline-block;">$-2, 4$</div>	$\times (3a+8)(5a-1)$	
	<div style="border: 1px solid green; padding: 2px; display: inline-block;">$1, -8$</div>	$\times (3a-2)(5a+4)$	$2a$
	<div style="border: 1px solid green; padding: 2px; display: inline-block;">$2, -4$</div>	$\times (3a+4)(5a-2)$	
		$\times (3a+1)(5a-8)$	
		$\times (3a-8)(5a+1)$	
		<div style="border: 1px solid black; padding: 2px; display: inline-block;">$(3a+2)(5a-4)$</div>	$-2a$
		$\times (3a-4)(5a+2)$	
<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: left;"> $3a+2=0$ $3a=-2$ $a=-\frac{2}{3}$ </div> <div style="text-align: left;"> $5a-4=0$ $5a=4$ $a=\frac{4}{5}$ </div> </div>			
		$(a-1)(15a+8)$	$-7a$
		$\times (a+8)(15a-1)$	
		$\times (a-2)(15a+4)$	
		$\times (a+4)(15a-2)$	
		$(a+1)(15a-8)$	$7a$
		$\times (a-8)(15a+1)$	
		$\times (a+2)(15a-4)$	
		$\times (a-4)(15a+2)$	

$$\textcircled{1} \quad \frac{16a^2}{8} - \frac{40b}{8} = 8(2a^2 - 5b)$$

$$\textcircled{13} \quad 6h^2 - 19h + 3$$

$$\begin{array}{l} \underline{6h^2} \\ h, 6h \\ 2h, 3h \end{array}$$

$$\begin{array}{l} \underline{3} \\ -1, -3 \end{array}$$

poss.

$$(h-1)(6h-3)$$

$$(h-3)(6h-1)$$

$$(2h-1)(3h-3)$$

$$(2h-3)(3h-1)$$

middle

$$-9h$$

$$-19h$$

answer

$$\textcircled{23} \quad 4y^2 + 31y = 8$$

$$4y^2 + 31y - 8 = 0$$

$$\begin{array}{l} 4y^2 \\ y, 4y \\ 2y, 2y \end{array}$$

$$\begin{array}{l} -8 \\ -1, 8 \\ -2, 4 \\ 1, -8 \\ 2, -4 \end{array}$$

$$\begin{array}{l} \text{poss} \\ (y+8)(4y-1) \end{array}$$

$$(y-8)(4y+1)$$

$$\begin{array}{l} \text{middle} \\ 31y \end{array}$$

$$-31y$$

$$y+8=0$$

$$y = -8$$

$$4y-1=0$$

$$4y = 1$$

$$y = \frac{1}{4}$$

→ When factoring

$$x^2 - a \underset{\text{sometimes}}{=} (x - a)(x + a)$$

$$x^2 - 16 = (x - 4)(x + 4)$$

→ when factoring

$$x^2 + bx + c \underset{\text{sometimes}}{=} (x + a)^2$$

$$x^2 + 12x + 36 = (x + 6)^2$$

→ when factoring a trinomial,
Sometimes you can pull out a G.C.F.:

$$6x^2 + 12x - 48 =$$

$$6(x^2 + 2x - 8) = 6(x + 4)(x - 2)$$

Homework —

Complete ch. 9 N.S. 2