

9-16-13
3rd Trig

Review

$$(x+3)(x+5)$$
$$x^2 + 5x + 3x + 15$$
$$x^2 + 8x + 15$$

$$(x+2)(x+6)$$
$$x^2 + 8x + 12$$

$$(x+6)(x-5)$$
$$x^2 + x - 30$$

$$(x+3)(x+7) = x^2 + 10x + 21$$

$$(x+1)(x+6) = x^2 + 7x + 6$$

$$(x+3)(x+10) = x^2 + 13x + 30$$

Factor $x^2 + 8x + 12$

$$(x+2)(x+6)$$

	12
	1, 12
	2, 6
	3, 4

Factor $x^2 + 21x + 20$

$$(x+1)(x+20)$$

	20
	1, 20
	2, 10
	4, 5

Factor $x^2 + 11x + 30$

$$(x+5)(x+6)$$

	30
	1, 30
	2, 15
	3, 10
	5, 6

Factor $x^2 + 4x - 12$

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

$$\begin{array}{r} 12 \\ \hline 1, 12 \\ \boxed{-2, 6} \\ 3, 4 \end{array}$$

Factor $x^2 + 13x - 30$

$$(x - 2)(x + 15)$$

$$\begin{array}{r} 30 \\ \hline 1, 30 \\ \boxed{-2, 15} \\ 3, 10 \\ 5, 6 \end{array}$$

Factor $x^2 - 11x + 10$

$$(x - 1)(x - 10)$$

$$\begin{array}{r} 10 \\ \hline -1, -10 \\ -2, 5 \end{array}$$

Factor $2x^2 + 7x + 5$

$\uparrow \quad \uparrow \quad \uparrow$
 $a \quad b \quad c$

2 possibilities

$(2x + 1)(x + 5)$ ✗

$(2x + 5)(x + 1)$ ✓

$$\frac{5}{1,5}$$

9-16-13
4th Trig

Review

$$\begin{aligned} & \overbrace{(x+4)(x+2)} \\ & x^2 + 2x + 4x + 8 \\ & x^2 + 6x + 8 \end{aligned}$$

$$\begin{aligned} & \overbrace{(x+3)(x+5)} \\ & x^2 + 8x + 15 \end{aligned}$$

$$\begin{aligned} & \overbrace{(x+5)(x+4)} \\ & x^2 + 9x + 20 \end{aligned}$$

$$\begin{aligned} & \overbrace{(x+2)(x+100)} \\ & x^2 + 102x + 200 \end{aligned}$$

$$\begin{aligned} & \overbrace{(x-4)(x+10)} \\ & x^2 + 6x - 40 \end{aligned}$$

$$\begin{aligned} & \overbrace{(x-1)(x-100)} \\ & x^2 - 101x + 100 \end{aligned}$$

$$\begin{aligned} \text{Factor } & x^2 + 12x + 20 & \frac{20}{1, 20} \\ & (x+2)(x+10) & \underline{2, 10} \\ & & 4, 5 \end{aligned}$$

$$\begin{aligned} \text{Factor } & x^2 + 13x + 12 & \frac{12}{1, 12} \\ & (x+1)(x+12) & 2, 6 \\ & & 3, 4 \end{aligned}$$

Factor $x^2 + 4x - 12$ $\frac{12}{1, 12}$
 $(x-2)(x+6)$ $\boxed{-2, 6}$
 $3, 4$

Factor $x^2 - 10x + 9$ $\frac{9}{-1, -9}$
 $(x-1)(x-9)$ $3, 3$

Factor $x^2 + 31x + 30$ $\frac{30}{1, 30}$
 $(x+1)(x+30)$ $2, 15$
 $3, 10$
 $5, 6$

$$ax^2 + bx + c$$

$$a \neq 1$$

Factor $\boxed{2x^2} + 11x + \boxed{14}$ $\frac{14}{1, 14}$
 $(2x+1)(x+14)x$ $2, 7$
 $(2x+14)(x+1)x$
 $(2x+2)(x+7)x$
 $(2x+7)(x+2) \checkmark$