

Warm-Up

Factor each completely.

1) $b^2 + 8b + 7$

$$(b+7)(b+1)$$

$$b^2 + \underline{b} + 7\underline{b} + 7$$

$$b^2 + 8b + 7 \checkmark$$

3) $m^2 + m - 90$

$$(m-9)(m+10)$$

5) $n^2 - 10n + 9$

$$(n-1)(n-9)$$

$$_ \cdot _ = 7$$

$$_ + _ = 8$$

2) $n^2 - 11n + 10$

$$(n-10)(n-1)$$

4) $n^2 + 4n - 12$

$$(n-2)(n+6)$$

6) $b^2 + 16b + 64$

$$(b+8)(b+8) = (b+8)^2$$

Geometry Factoring Trinomials ($a > 1$)

L-O-T

Name: Kay
Date: _____

1. $2w^2 - 11w + 15$
 $\begin{matrix} 1 & \wedge & 15 \\ 1 & \wedge & 5 \\ 2 & & 3 \end{matrix}$
 ~~$(2w - 1)(w + 15)$~~

$2w^2 - 6w - 5w + 15$

$2w^2 - 11w + 15$
✓

~~$(2w - 15)(w + 1)$~~

~~$(2w - 3)(w - 5)$~~

$(2w - 5)(w - 3)$

2. $3t^2 - 13t - 10$
 $\begin{matrix} 1 & \wedge & 10 \\ 1 & \wedge & 5 \\ 3 & & 2 \end{matrix}$

$(3t + 2)(t - 5)$

$3t^2 - 15t + 2t - 10$

$3t^2 - 13t - 10$ ✓

3. $8x^2 + 5x - 3$
 $\begin{matrix} 1 & \wedge & 8 \\ 1 & \wedge & 3 \\ 2 & & 4 \end{matrix}$

$(8x - 3)(x + 1)$

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

$8x^2 + 5x - 3$ ✓

4. $6p^2 - 49p + 8$
 $\begin{matrix} 1 & \wedge & 6 \\ 1 & \wedge & 8 \\ 2 & & 3 \end{matrix}$

$(6p - 1)(p - 8)$

$6p^2 - 48p - p + 8$

$6p^2 - 49p + 8$ ✓

5. $5x^2 - 17x - 12$
 $\begin{matrix} 1 & \wedge & 5 \\ 1 & \wedge & 12 \\ 2 & & 6 \\ 3 & & 4 \end{matrix}$

$(5x + 3)(x - 4)$

$\begin{matrix} -20x \\ 3x \\ \hline -17x \end{matrix}$

6. $3x^2 - 5x - 2$
 $\begin{matrix} 1 & \wedge & 3 \\ 1 & \wedge & 2 \\ 3 & & 1 \end{matrix}$

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

7. $4x^2 - 8x - 5$
 $\begin{matrix} 1 & \wedge & 4 \\ 1 & \wedge & 5 \\ 2 & & 2 \end{matrix}$

$(2x + 1)(2x - 5)$

8. $9x^2 - 9x - 4$
 $\begin{matrix} 1 & \wedge & 9 \\ 1 & \wedge & 4 \\ 3 & & 3 \\ 2 & & 2 \end{matrix}$

$(3x + 1)(3x - 4)$

9. $3x^2 - 11x - 4$
 $\begin{matrix} 1 & \wedge & 3 \\ 1 & \wedge & 4 \\ 2 & & 2 \end{matrix}$

$(3x + 1)(x - 4)$

10. $5x^2 + 21x + 4$
 $\begin{matrix} 1 & \wedge & 5 \\ 1 & \wedge & 4 \\ 2 & & 2 \end{matrix}$

$(5x + 1)(x + 4)$

WHAT DID MRS. ZLING SAY WHEN MR. ZLING SAID HE WAS GOING MOUNTAIN CLIMBING IN THE HIMALAYAS

Factor each trinomial below. Find both factors in the rectangle below and cross out each box containing a factor. You will cross out **two** boxes for each exercise. When you finish, print the letters from the remaining boxes in the squares at the bottom of the page.

- ① $6x^2 + 19x + 3$ $(6x + 1)(x + 3)$
- ② $5x^2 - 9x - 2$ $(5x + 1)(x - 2)$
- ③ $9x^2 + 15x + 4$ $(3x + 4)(3x + 1)$
- ④ $7x^2 + x - 8$ $(7x + 8)(x - 1)$
- ⑤ $2x^2 - 21x + 40$ $(2x - 5)(x - 8)$
- ⑥ $15m^2 + 19m + 6$ $(3m + 2)(5m + 3)$
- ⑦ $8m^2 - 5m - 3$ $(8m + 3)(m - 1)$
- ⑧ $4m^2 - 17m + 18$ $(4m - 9)(m - 2)$
- ⑨ $14m^2 + 17m - 22$ $(14m - 11)(m + 2)$
- ⑩ $3m^2 - m - 30$ $(3m - 10)(m + 3)$

TH $(4m - 9)$	AT $(3x + 1)$	PA $(m - 2)$	<u>DO</u> $(m - 3)$	NE $(2x - 5)$	XT $(8m - 10)$	CK $(14m - 11)$	<u>YO</u> $(2m - 3)$	UR $(5x + 1)$
UP $(5x + 1)$	<u>UW</u> $(15m + 1)$	IN $(x + 3)$	PL $(m + 2)$	<u>AN</u> $(x + 4)$	DA $(5m + 3)$	RE $(x - 2)$	MA $(3m + 2)$	<u>TT</u> $(9x + 2)$
CO $(7x + 8)$	LD $(3x + 4)$	<u>IB</u> $(7x + 2)$	ER $(8m + 3)$	AJ $(m + 3)$	<u>ET</u> $(7m + 2)$	ON $(x - 8)$	HI $(4m + 1)$	GH $(x - 1)$

DO YOU WANT TIBET