

2.27.20

At The Bell: **PSSA:** Simplify $(2x + 5)(3x - 2)$

$$\begin{array}{r} 6x^2 - 4x \\ 15x - 10 \\ \hline 6x^2 + 11x - 10 \end{array}$$

8-5 Factoring $x^2 + bx + c$ Factor completely. (Look for a GCF 1st.)

1. $x^2 + 5x + 6 = (x+3)(x+2)$

Solve.

1 st	3 rd	*	+
x	1	x	
x	6	6x	7x
x	+2	+2x	
x	+3	+3x	+5x

Check.

$$\begin{array}{r}
 (x+3)(x+2) \\
 x^2 + 2x \\
 + 3x + 6 \\
 \hline
 x^2 + 5x + 6
 \end{array}$$

8-5 Factoring $x^2 + bx + c$ Factor completely. (Look for a GCF 1st.)

2. $x^2 - 4x - 45 = (x - 9)(x + 5)$

Solve.

1 st	3 rd	*	
x	1	x	> 44x
x	45	45x	
x	3	3x	> 12x
x	15	15x	
x	+5	+5x	> -4x
x	-9	-9x	

Check.

$$\begin{array}{r}
 (x-9)(x+5) \\
 x^2 + 5x \\
 -9x - 45 \\
 \hline
 x^2 - 4x - 45
 \end{array}$$

8-5 Factoring $x^2 + bx + c$ Factor completely. (Look for a GCF 1st.)

3. $n^2 + 17n + 72 = (n+9)(n+8)$

Solve.

Check.

1 st	3 rd	*	
n	$+8$	$+8n$	$> +17n$
n	$+9$	$+9n$	

8-5 Factoring $x^2 + bx + c$ Factor completely. (Look for a GCF 1st.)

5. $6b^2 - 18b - 108 = 6(b-6)(b+3)$

$6(b^2 - 3b - 18)$

Solve.

Check.

1 st	3 rd	*	
$b+3$	$b-6$	$+3b$	$> -3b$
$b-6$	$b+3$	$-6b$	

$6(b-6)(b+3)$

$b^2 + 3b - 6b - 18$

$$\begin{array}{r}
 6(b^2 - 3b - 18) \\
 6b^2 - 18b - 108
 \end{array}$$

8-5 Factoring $x^2 + bx + c$ Factor completely. (Look for a GCF 1st.)

6. $4n^2 - 52n + 120$ $4(n-10)(n-3)$

Solve. $4(n^2 - 13n + 30)$

Check.

1 st	3 rd	*	
n	2	$2n$	
n	15	$15n$	$> 17n$
n	-3	$-3n$	$> -13n$
n	-10	$-10n$	

Assignment:

When is a Wrestler
"King of the Ring"?

When Is a Wrestler “King of the Ring”?

Factor each trinomial below. Find your answer and notice the letter next to it. Write this letter in the box containing the number of that exercise. Keep working and you will get the gripping answer to the title question.

- ① $n^2 + 6n + 5$
- ② $n^2 + 7n + 10$
- ③ $n^2 - 7n + 12$
- ④ $n^2 - 11n + 28$
- ⑤ $n^2 + 2n - 15$
- ⑥ $n^2 - 5n - 24$
- ⑦ $n^2 + n - 56$

Answers:

- Ⓐ $(n + 2)(n + 6)$
- Ⓕ $(n + 5)(n - 3)$
- Ⓦ $(n + 5)(n + 1)$
- Ⓔ $(n - 3)(n - 4)$
- Ⓑ $(n - 1)(n + 15)$
- Ⓢ $(n + 8)(n - 7)$
- Ⓗ $(n + 2)(n + 5)$
- Ⓔ $(n - 8)(n + 3)$
- Ⓡ $(n - 12)(n - 2)$
- Ⓝ $(n - 7)(n - 4)$

- ⑧ $t^2 + 10t + 16$
- ⑨ $t^2 - 15t + 50$
- ⑩ $t^2 + 8t - 9$
- ⑪ $t^2 - 7t - 30$
- ⑫ $t^2 - t - 30$
- ⑬ $t^2 + 14t + 48$
- ⑭ $t^2 + 8t - 48$

Answers:

- Ⓝ $(t - 6)(t + 5)$
- Ⓥ $(t - 25)(t + 2)$
- Ⓣ $(t - 5)(t - 10)$
- Ⓣ $(t + 6)(t + 8)$
- Ⓞ $(t - 10)(t + 3)$
- Ⓑ $(t + 15)(t - 2)$
- Ⓘ $(t + 8)(t + 2)$
- Ⓗ $(t - 4)(t + 12)$
- Ⓢ $(t + 9)(t - 1)$
- Ⓐ $(t - 24)(t + 2)$

- ⑮ $a^2 + 5ab + 6b^2$
- ⑯ $a^2 - 4ab - 21b^2$
- ⑰ $a^2 + 6ab - 7b^2$
- ⑱ $a^2 - 14ab - 32b^2$
- ⑲ $a^2 - 29ab + 100b^2$
- ⑳ $a^2 + 7ab - 18b^2$
- ㉑ $a^2 + 2ab + b^2$

Answers:

- Ⓚ $(a - 8b)(a + 4b)$
- Ⓗ $(a + 7b)(a - b)$
- Ⓐ $(a - 20b)(a + 5b)$
- Ⓔ $(a + 2b)(a + 3b)$
- Ⓦ $(a + 9b)(a - 2b)$
- Ⓣ $(a - 7b)(a + 3b)$
- Ⓞ $(a - 25b)(a - 4b)$
- Ⓢ $(a + 6b)(a + 3b)$
- Ⓝ $(a + b)(a + b)$
- Ⓡ $(a - 16b)(a + 2b)$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
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Algebra 1

Name _____

8-5.1 $x^2 + bx + c$ HW

Date _____ Period _____

Factor each completely.

1) $x^2 + 16x + 63$

2) $x^2 + 11x + 18$

3) $v^2 - v - 56$

4) $p^2 + 9p + 8$

5) $x^2 - 9x + 14$

6) $k^2 - 10k + 24$

7) $5n^2 - 30n - 80$

8) $6x^2 - 60x + 54$

9) $6x^2 + 18x - 108$

10) $2n^2 + 4n - 126$