

Simplifying Variable Expressions (2-3)

Steps:

1. Identify each term (separate btwn +/- signs) **color code like terms**
2. Simplify terms if needed
3. Combine **like terms** (pay attention to the signs!!)
4. You can check your work by picking a value for each variable and 'plugging it in' to the original expression and your simplified answer

Examples:

1. $5x + 7 - 3x + 2$ ★
2. $5x \cdot 7 - 3x + 2 = 32x + 2$
3. $11y + 3x - 6y + x$ ★
4. **SKIPI!** $7x^2 + x - 2x^2 - 3x$ ★
5. $12a + 2 - 3a$ ★
▲

6x + 9 + 2x

3x + 4 + x + 6

3y + 2v + 3 + 7 + y = 2z

3x + 2x + 3y - 2x + 2y

Distributive Property

$3(4+5)$

Method 1: Order of Ops Method 2: Distributive Property

$3(4 + 5) = 3(4 + 5)$


*We can use our knowledge of the *Distributive Property* to help simplify algebraic expressions.

Steps:

1. Simplify inside parentheses first if possible
2. Distribute the number on the outside to ALL terms on the inside
3. Combine like terms

Examples:

1) $3(2 + 3x) + 4x + 12 = 6 + 9x + 4x + 12 = 3x + 18$



$3(4+5)$

$3(9)$

27

$\frac{3 \times 4}{12} + \frac{3 \times 5}{15} = 27$

$3(x+5)$

$3x + 15$

Name: _____ Date: _____ Period: _____

Distributive Property (positive numbers only)

1.) $5(3x + 7) =$ $15x + 35$	2.) $2(4x + 5) =$ $8x + 10$
3.) $9(7x - 4) =$	4.) $5(8x - 2) =$
5.) $4(9x + 2) + 5x - 3 =$ $36x + 8 + 5x - 3$ $41x + 5$	6.) $2(9x + 6) - 8x + 2y - 3 =$ $18x + 12 - 8x + 2y - 3$ $10x + 2y + 9$
7.) $2(8x + 4) + 15 - 9x =$	8.) $3(2x + 5) + 7x =$
9.) $5(x + 10) + 5x - 3 =$	10.) $10(2x - 4) - 5 + 16x =$

How Many Cattle Are There On The Lazy Circle Double-O Bar Four Square Ranch?

Simplify any expression below and find your answer in the corresponding answer column. Write the letter of the exercise in the box that contains the number of the answer. Keep working and you will discover the answer to this title question.

<p>$7(2m + 6) + 8m$ $14m + 42 + 8m$ $22m + 42$</p> <p>Ⓐ $3(1 + 4m) + 5m$</p> <p>Ⓑ $6m + 7(7m + 9)$</p> <p>Ⓒ $4 + 6(3m + 2)$</p> <p>Ⓓ $9 + 9(5 - 4m)$</p> <p>Ⓔ $2 + (6m + 5)$</p> <p>Ⓕ $(4m - 3)9 + 6m$</p>	<p>Ⓙ $36m + 54$</p> <p>Ⓚ $42m + 23$</p> <p>Ⓛ $17m + 3$</p> <p>Ⓜ $18m + 16$</p> <p>Ⓝ $22m + 42$</p> <p>Ⓟ $42m + 27$</p> <p>Ⓠ $55m + 63$</p>	<p>Ⓢ $3 + 5(5t - 1) + 8t$</p> <p>Ⓣ $6t + 3(2 - 9t) + 7$</p> <p>Ⓤ $4t + 9 + (2t + 7)6$</p> <p>Ⓡ $6t + (7 + 3t)4 + 2t$</p> <p>Ⓩ $7(t + 9) + 5 + 4$</p> <p>Ⓜ $9 + 5(f + 1) + 4t$</p> <p>Ⓡ $t + 3 + 8(5 + t)$</p>
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Ⓛ $3(x + 6) + 8x$	Ⓢ $13x + 11$	Ⓢ $5(8k + 2) + 8(3 + 4k)$
Ⓡ $5(x + 5) + 9$	Ⓣ $11x + 18$	Ⓣ $(3k + 4)6 + 7(k + 6)$
Ⓡ $7(2 - x) + 6x$	Ⓤ $16x + 22$	Ⓣ $9(7 + k) + (8k + 3)2$
Ⓡ $x + 5(5x - 1)$	Ⓡ $5x + 49$	Ⓡ $(9k + 1)6 + (4 + 2k)9$
Ⓡ $4 + (8x + 9)2$	Ⓡ $5x + 34$	Ⓡ $7(7 + 8k) + 3(k + 5)$
Ⓡ $x + (4 + 3x)7$	Ⓡ $25x + 5$	Ⓡ $4(2 + 4k) + (7k + 1)8$
Ⓡ $5(8 - x) + 9$	Ⓡ $22x + 28$	Ⓡ $4(2k + 6) + 8(3 + 3k)$

★ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

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How Many Cattle Are There On The Lazy Circle Double-O Bar Four Square Ranch?

Simplify any expression below and find your answer in the corresponding answer column. Write the letter of the exercise in the box that contains the number of the answer. Keep working and you will discover the answer to the title question.



- Ⓐ $7(2m - 9) + 6m$
- Ⓐ $3(1 + 4m) + 5m$
- Ⓒ $6m + 7(7m + 5)$
- Ⓒ $4 + 5(3m + 2)$
- Ⓓ $9 + 9(6 - 4m)$
- Ⓓ $2 + (6m + 3)7$
- Ⓔ $(4m - 3)9 + 6m$
- Ⓔ $96m + 54$
- Ⓕ $42m + 23$
- Ⓕ $17m + 3$
- Ⓖ $18m + 16$
- Ⓖ $23m + 42$
- Ⓗ $42m + 27$
- Ⓗ $55m + 63$

- Ⓖ $3 + 5(5t - 1) + 6t$
- Ⓖ $6t + 3(2 - 9t) + 7$
- Ⓙ $4t + 9 + (2t + 7)6$
- Ⓙ $6t + (7 + 3t)4 + 2t$
- Ⓚ $7(t + 9) + 5 + 4t$
- Ⓚ $9 + 5(t + 1) + 4t$
- Ⓚ $t + 3 + 8(5 + t)$
- Ⓚ $15t + 51$
- Ⓚ $9t + 43$
- Ⓚ $33t + 13$
- Ⓚ $9t + 14$
- Ⓚ $33t + 8$
- Ⓚ $8t + 68$
- Ⓚ $22t + 28$

- Ⓐ $34x + 6) + 8x$
- Ⓐ $5(x + 5) + 9$
- Ⓒ $7(2 - x) + 6x$
- Ⓒ $x + 5(5x - 1)$
- Ⓓ $4 + (5x + 9)2$
- Ⓓ $x + (4 + 3x)7$
- Ⓔ $5(8 - x) + 9$
- Ⓔ $13x + 14$
- Ⓕ $11x + 18$
- Ⓕ $16x + 22$
- Ⓖ $5x + 49$
- Ⓖ $5x + 34$
- Ⓗ $25x + 5$
- Ⓗ $22x + 28$

- Ⓖ $5(9k + 2) + 8(3 + 4k)$
- Ⓖ $(3k + 4)6 + 7(k + 6)$
- Ⓙ $9(7 + k) + (6k + 3)2$
- Ⓙ $(9k + 1)6 + (4 + 2k)9$
- Ⓚ $7(7 + 8k) + 3(k + 5)$
- Ⓚ $4(2 + 4k) + (7k + 1)8$
- Ⓚ $4(2k + 6) + 8(3 + 3k)$
- Ⓚ $59k + 64$
- Ⓚ $21k + 69$
- Ⓚ $52k + 48$
- Ⓚ $72k + 42$
- Ⓚ $72k + 16$
- Ⓚ $77k - 34$
- Ⓚ $25k - 56$

★ 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 ★
 FEW OF THEM SURVIVED THE BRANDING