Warm - Up

1.) A rectangular garden has a length of 20 feet and a width of 10 feet. What is the perimeter of the garden?

2) What expression represents the perimeter of this rectangle?

x

x+9

3)A rectangular piece of plywood is 8 times longer than it is wide. What expression represents the perimeter?

1) P = add all sides

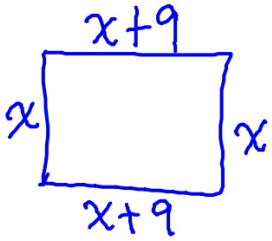
$P = 10 + 10 + 20 + 20$

$\boxed{P = 60\text{ ft}}$

2) P = add all sides

$x + x + x + 9 + x + 9$

$4x + 18$



$2(x) + 2(x+9)$

$2x + 2x + 18$

$4x + 18$

3)

P = add all sides

$x + x + 8x + 8x$

$18x$

Daily HW Check:
Box 7: Combining Like Terms # 6
Box 8: Combining Like Terms # 11

When finished go to the weebly to check and correct your answers.

Combine Like Terms...

1. $3a + 5 - x + 7x - 2a$ $3a - 2a - x + 7x + 5$ → $\boxed{a + 6x + 5}$

2. $2x - 5 + 3a - 5x + 10a$ $2x - 5x + 3a + 10a - 5$ → $\boxed{-3x + 13a - 5}$ $13a - 3x - 5$

3. $7b^2 - b - x + 5 - 2x - 7b$ $7b^2 - b - 7b - x - 2x + 5$ → $\boxed{7b^2 - 8b - 3x + 5}$

4. $-6m + 3n + 4 - 4m - 2n$ $-6m - 4m + 3n - 2n + 4$ → $\boxed{-10m + n + 4}$

5. $2r + 3s - 5r$ $2r - 5r + 3s$ → $\boxed{-3r + 3s}$

6. $4 - p - 2x + 3p - 7x$ $-p + 3p - 2x - 7x + 4$ → $\boxed{2p - 9x + 4}$

7. $3k - 2x + 6k + 5$ $3k+6k-2x+5$ $\boxed{9k-2x+5}$

8. $3 + 2a - 7x + 2.5 + 5x$ $-7x+5x+2a+3+2.5$ $-2x+2a+3+2.5$ $\boxed{-2x+2a+5.5}$ → $2a-2x+5.5$

9. $4a + 3 - 2y - 5a - 7 + 4y$ → $4a-5a-2y+4y+3-7$ $\boxed{-a+2y-4}$

10. $c^3 - 3 + 2x^2 - 6c + 4x^2$ c^3+6x^2-6c-3

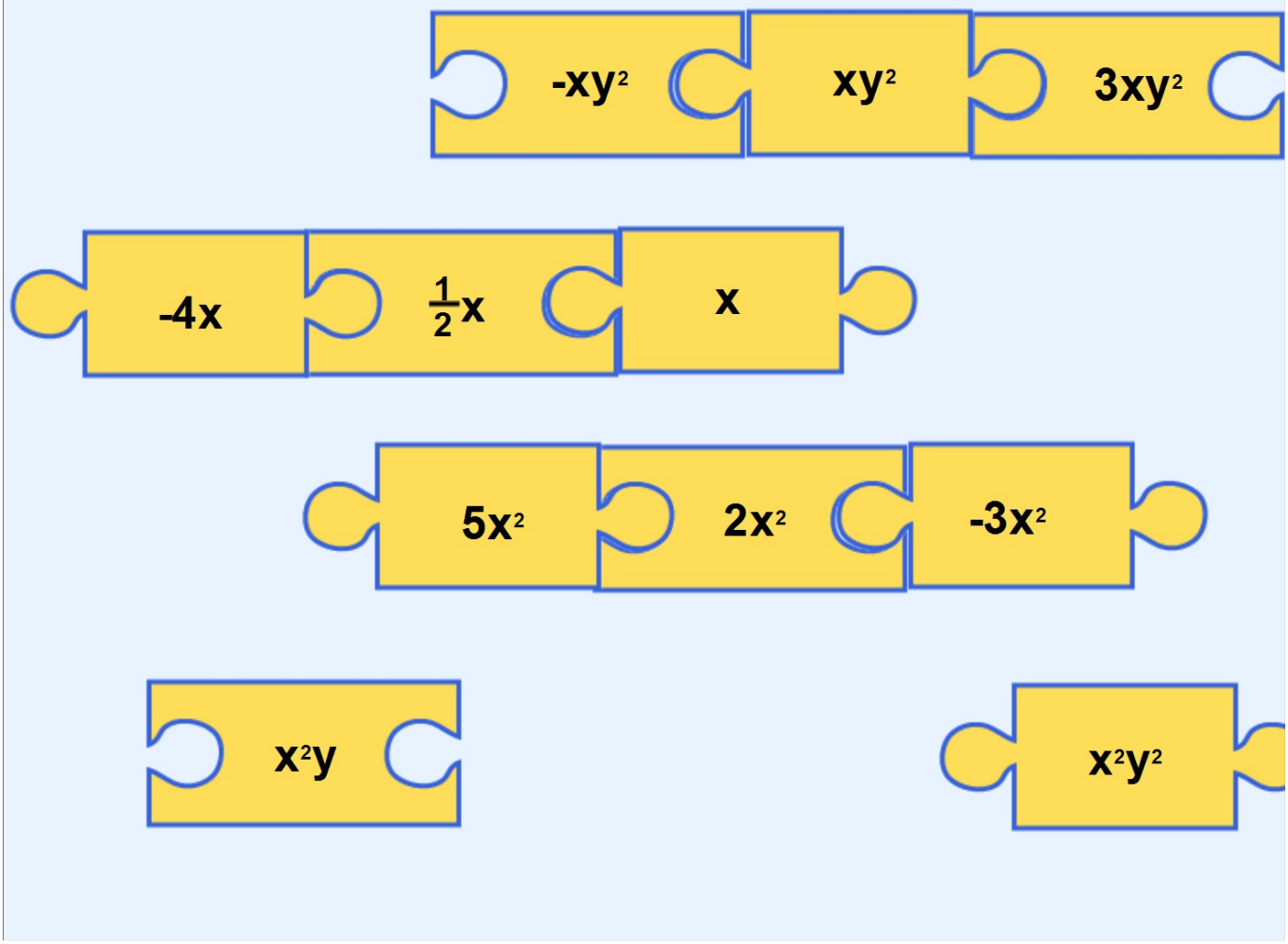
11. $3ab + 4a^2 - 5a^2 + 4ab - 6ab^2$ $\boxed{7ab - a^2 - 6ab^2}$ → $-a^2+7ab-6ab^2$

12. $-2a + 3b - 3ab + 4a$ $\boxed{2a+3b-3ab}$

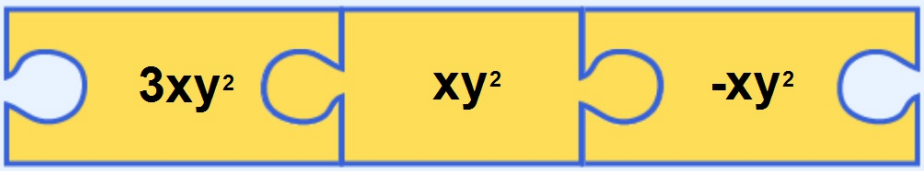
13. $5c - 2d + 3cd + 4c$ $\boxed{9c-2d+3cd}$

14. $-6ab^2 - 4ab + 2a^2b - 4a^2b$ $\boxed{-2a^2b - 6ab^2 - 4ab}$

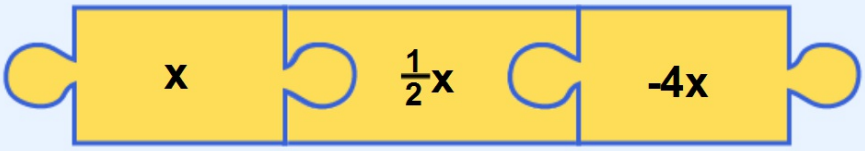
Find like terms and match the puzzle pieces



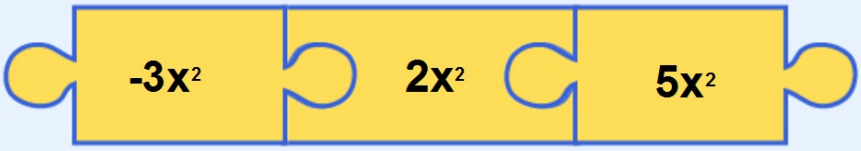
Solution



Like terms



Like terms



Like terms

Not like terms

Commutative property: Change Order

Apply the commutative property to simplify

$3x^2 + 6y + 7y - 3x^2$

$3x^2 - 3x^2 + 6y + 7y$

$13y$

$3x + 2y - 2x + 5y$

$3x - 2x + 2y + 5y$

$x + 7y$

Vocabulary

Distributive Property: is used to multiply a single term and two or more terms inside a set of parentheses.

$a(b + c) = ab + ac$

The Distributive Property

Example 1: Expand using the distributive property.

(a) $3(x + 1)$

$3(x)+3(1)$

$3x+3$

(b) $(x - 2)7$

$7(x)+7(-2)$

$7x-14$

(c) $(2 + 5x)3$

$3(2)+3(5x)$

$6+15x \rightarrow 15x+6$

(d) $-(2 - d)$

$-1(2)-1(-d)$

$-2+d$

$\boxed{d-2}$

Apply the distributive property to simplify like terms

Example 2)

5(4 + x) - 2x

$5(4)+5(x)-2x$

$20+5x-2x$

$20+3x$

$3x+20$

Example 3)

3(x + 2y) - 6(- 3 + 4y) +9

$3(x)+3(2y)-6(-3)-6(4y)+9$

$3x+6y+18-24y+9$

$3x+6y-24y+18+9$

$3x-18y+27$

~Group Practice~

8y - 4y + 4(y - 2)

$8y-4y+4(y)+4(-2)$

$8y-4y+4y-8$

$4y+4y-8$

$8y-8$

9x - 4(x + 2)

$9x-4(x)-4(2)$

$9x-4x-8$

$5x-8$