

JEOPARDY!



Introduction	Adding Polynomials	Multiplying Monomials	Multiplying Polynomials	Special Products
<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>10</u>
<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>	<u>20</u>
<u>30</u>	<u>30</u>	<u>30</u>	<u>30</u>	<u>30</u>
<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>
<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>	<u>50</u>

Question 1 - 10

- Find the degree of the following polynomial. Then determine if it is a monomial, binomial, or trinomial.

$$7ab + 6b^2 - 2a^3$$

Answer 1 – 10

$$7ab + 6b^2 - 2a^3$$

- Degree = 3
- Trinomial



Question 1 - 20

- Find the degree of the following polynomial and state whether it is a monomial, binomial, or trinomial.

$$8x^3y^2 + 2y^4 - 3x$$

Answer 1 – 20

$$8x^3y^2 + 2y^4 - 3x$$

- Degree = 5 (3+2 = 5)
- Trinomial



Question 1 - 30

- Determine whether or not the following is a polynomial.

$$2x^2 - 45xy + 6y^2$$

Answer 1 – 30

$$2x^2 - 45xy + 6y^2$$

- YES, the following is a polynomial (made up of sums and differences of monomials/terms)



Question 1 - 40

Write the following in standard form and identify the leading coefficient.

$$2x^5 - 12 + 18x$$

Answer 1 – 40

$$2x^5 - 12 + 18x$$

$$2x^5 + 18x - 12$$

(order the terms by degree, greatest to least)



Question 1 - 50

- Write the following in standard form and identify the leading coefficient.

$$2x^4 - 3x^5 + 5x^{-2} - 10$$

Answer 1 – 50

$$2x^4 - 3x^5 + 5x^{-2} - 10$$

This is NOT a polynomial (there is a negative exponent, meaning that there is a term with a variable in the denominator)



Question 2 - 10

- Find the sum of the following

$$(z^2 + 8z - 6) + (7z - 4)$$

Answer 2 – 10

$$(z^2 + 8z - 6) + (7z - 4)$$

$$z^2 + 15z - 10$$



Question 2 - 20

- Find the sum

$$(-8xy + 3x^2 - 5y) + (4x^2 - 2y + 6xy)$$

Answer 2 – 20

$$(-8xy + 3x^2 - 5y) + (4x^2 - 2y + 6xy)$$

$$7x^2 - 2xy - 7y$$



Question 2 - 30

- Find the difference

$$(2x + 3x^2) - (7 - 8x^2)$$

Answer 2 – 30

$$(2x + 3x^2) - (7 - 8x^2)$$

$$(2x + 3x^2) - (7 - 8x^2)$$

$$(2x + 3x^2) + (-7 + 8x^2)$$

$$2x - 7 + 11x^2$$

$$11x^2 + 2x - 7$$



Question 2 - 40

- Find the difference.

$$(4rxt - 8r^2x + x^2) - (6rx^2 + 5rxt - 2x^2)$$

Answer 2 – 40

$$(4rxt - 8r^2x + x^2) - (6rx^2 + 5rxt - 2x^2)$$

$$3x^2 - rxt - 8r^2x - 6rx^2$$



Question 2 - 50

- Simplify the following:

$$(3n^3 + 3n - 10) - (4n^2 - 5n) + (4n^3 - 3n^2 - 9n + 4)$$

Answer 2 – 50

$$(3n^3 + 3n - 10) - (4n^2 - 5n) + (4n^3 - 3n^2 - 9n + 4)$$

$$7n^3 - 7n^2 - n - 6$$



Question 3 - 10

- Find the product

$$b(b^2 - 12b + 1)$$

Answer 3 – 10

$$b(b^2 - 12b + 1)$$

$$b^3 - 12b^2 + b$$



Question 3 - 20

Find the product

$$4km^2 (8km^2 + 2k^2m + 5k)$$

Answer 3 – 20

$$4km^2 (8km^2 + 2k^2m + 5k)$$

$$32k^2m^4 + 8k^3m^3 + 20k^2m^2$$



Question 3 - 30

- Simplify:

$$-3(5x^2 + 2x + 9) + x(2x - 3)$$

Answer 3 – 30

$$-3(5x^2 + 2x + 9) + x(2x - 3)$$

$$-13x^2 - 9x - 27$$



Question 3 - 40

- Simplify

$$-5q^2w^3(4q + 7w) + 4qw^2(7q^2w + 2q) - 3qw(3q^2w^2 + 9)$$

Answer 3 – 40

$$-5q^2w^3(4q + 7w) + 4qw^2(7q^2w + 2q) - 3qw(3q^2w^2 + 9)$$

$$-q^3w^3 - 35q^2w^4 + 8q^2w^2 - 27qw$$



Question 3 - 50



- Solve for c

$$9c(c - 11) + 10(5c - 3) = 3c(c + 5) + c(6c - 3) - 30$$

Answer 3 – 50

$$9c(c - 11) + 10(5c - 3) = 3c(c + 5) + c(6c - 3) - 30$$

$$c = 0$$



Question 4 - 10

Find the product

$$(g + 10)(2g - 5)$$

Answer 4 – 10

$$(g + 10)(2g - 5)$$

$$2g^2 + 15g - 50$$



Question 4 - 20

- Find the product

$$(4y^2 - 3)(4y^2 + 7y + 2)$$

Answer 4 – 20

$$(4y^2 - 3)(4y^2 + 7y + 2)$$

$$16y^4 + 28y^3 - 4y^2 - 21y - 6$$



Question 4 - 30

- Find the product

$$(m^2 - 5m + 4)(m^2 + 7m - 3)$$

Answer 4 – 30

$$(m^2 - 5m + 4)(m^2 + 7m - 3)$$

$$m^4 + 2m^3 - 34m^2 + 43m - 12$$



Question 4 - 40

- Simplify

$$(m + 2) [(m^2 + 3m - 6) + (m^2 - 2m + 4)]$$

Answer 4 – 40

$$(m + 2) [(m^2 + 3m - 6) + (m^2 - 2m + 4)]$$

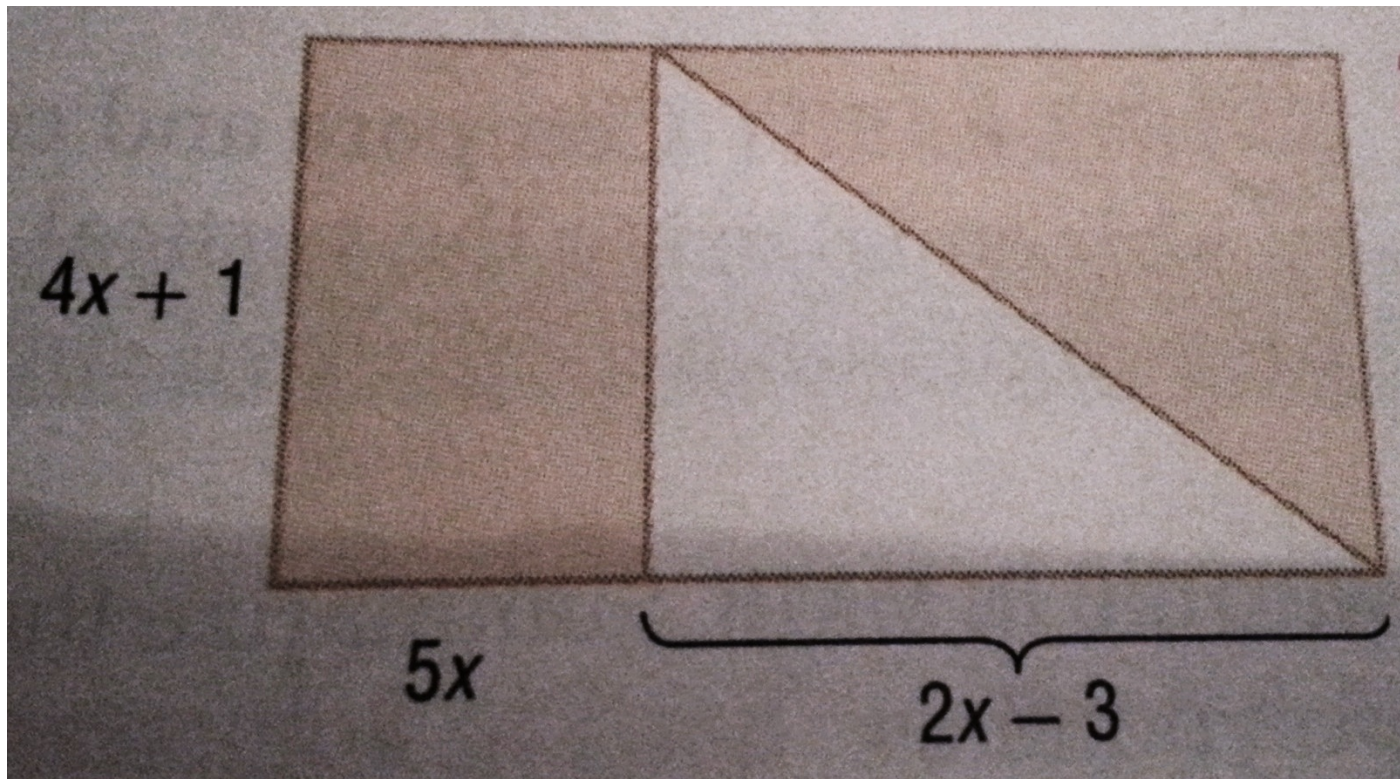
$$2m^3 + 5m^2 - 4$$



Question 4 - 50

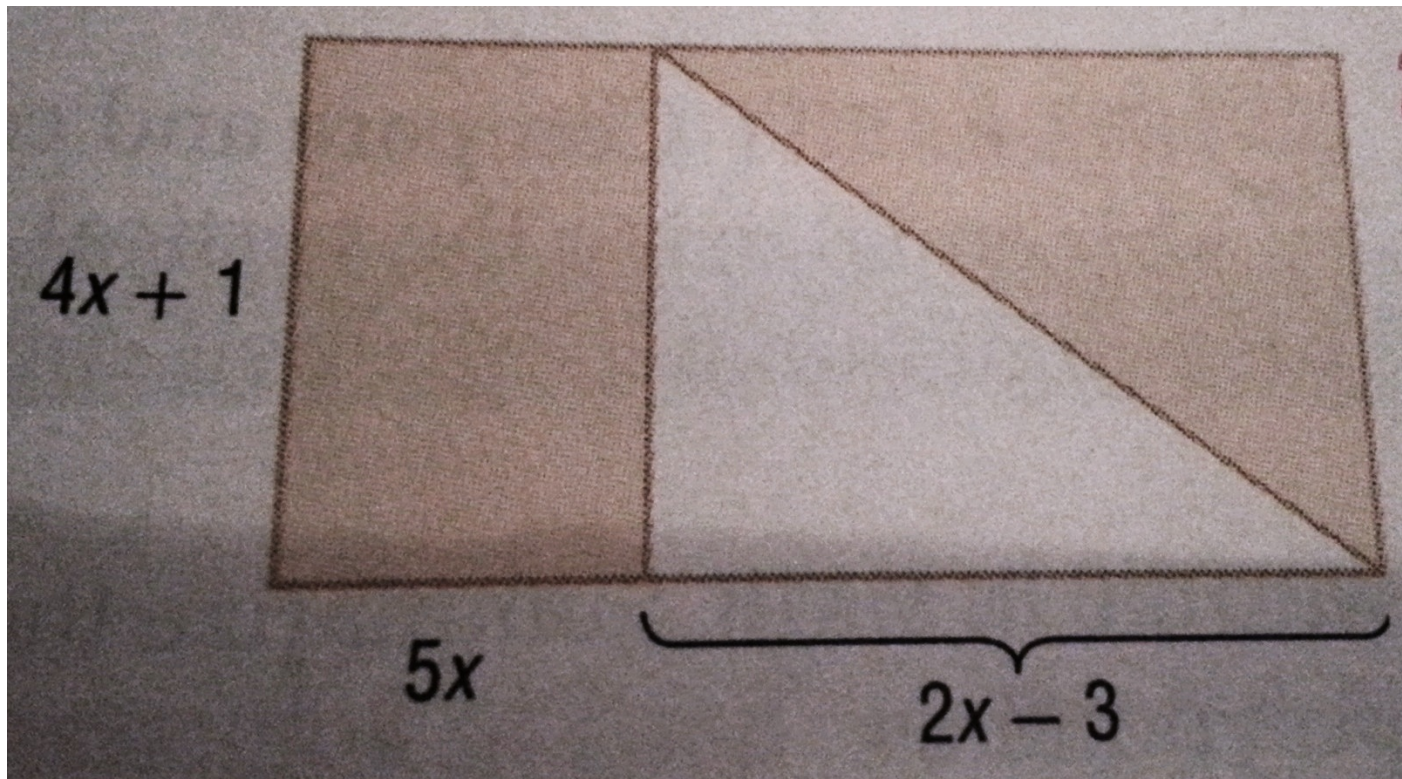


- Find an expression to represent the area of the shaded region



Answer 4 – 50

$24x^2 - (3/2)$ OR $24x^2 - 1.5$



Question 5 - 10

- Use special products to find the product of

$$(x + 5)^2$$

Answer 5 – 10

$$(x + 5)^2$$

$$x^2 + 10x + 25$$



Question 5 - 20

- Use special products to find the product of

$$(8 - 10a)^2$$

Answer 5 – 20

$$(8 - 10a)^2$$

$$64 - 160a + 100a^2$$



Question 5 - 30

- Use special products to find:

$$(3a^4 - b)(3a^4 + b)$$

Answer 5 – 30

$$(3a^4 - b)(3a^4 + b)$$

$$9a^8 - b^2$$



Question 5 - 40

- Use special products to find

$$(2c - 9d)(2c - 9d)$$

Answer 5 – 40

$$(2c - 9d)(2c - 9d)$$

$$4c^2 - 36cd + 81d^2$$



Question 5 - 50

- A flying disk shaped like a circle has a radius of $x + 3$ inches.
- Write an expression representing the area of the flying disk. Leave your answer in terms of pi (do not use 3.14, just write pi as π)

Answer 5 – 50

- Area of the flying disk with radius $(x + 3)$

$$\pi x^2 + 6\pi x + 9\pi$$



Agenda

Homework:

- Study Guide
- TEST on Wed/
Thurs
- AM

Materials:

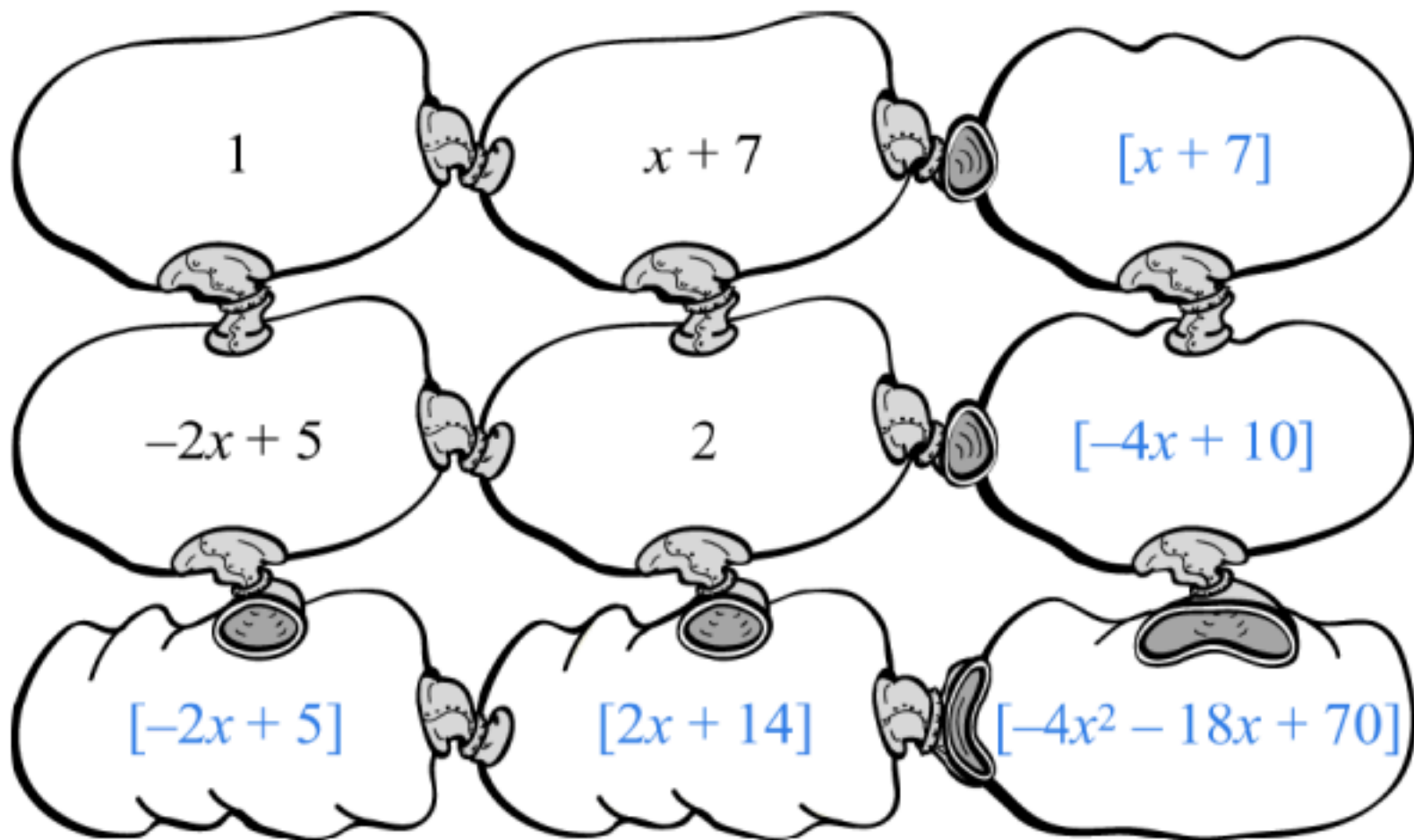
- Calculator (if
needed)

DO NOW:

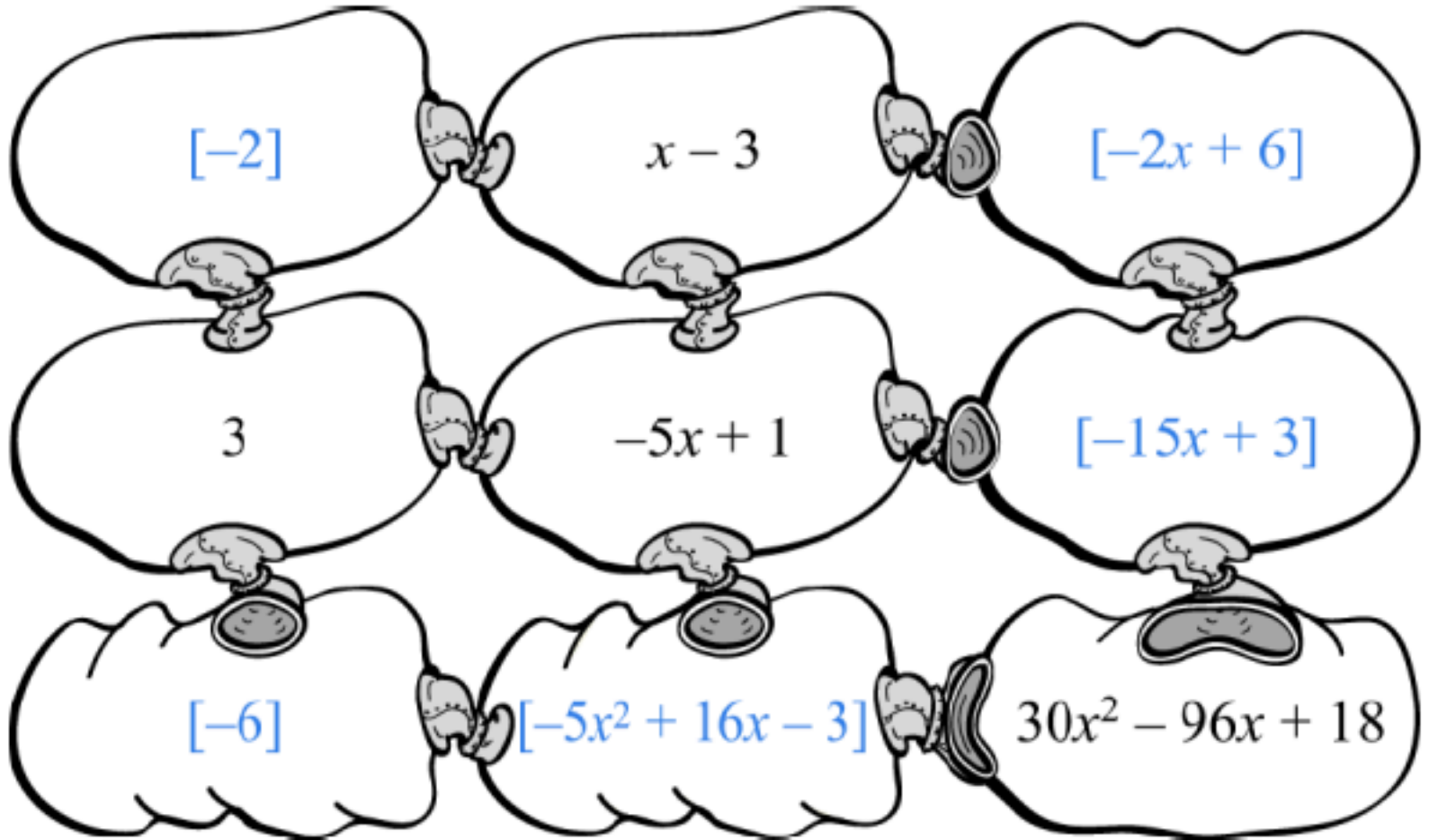
- ① Take out homework
- ② (Pd 6 – Javen)
Please hand out the
Puzzle worksheet
- ③ For the next 15
minutes, work
individually or in
groups on the Puzzle
Worksheet

Check Answers

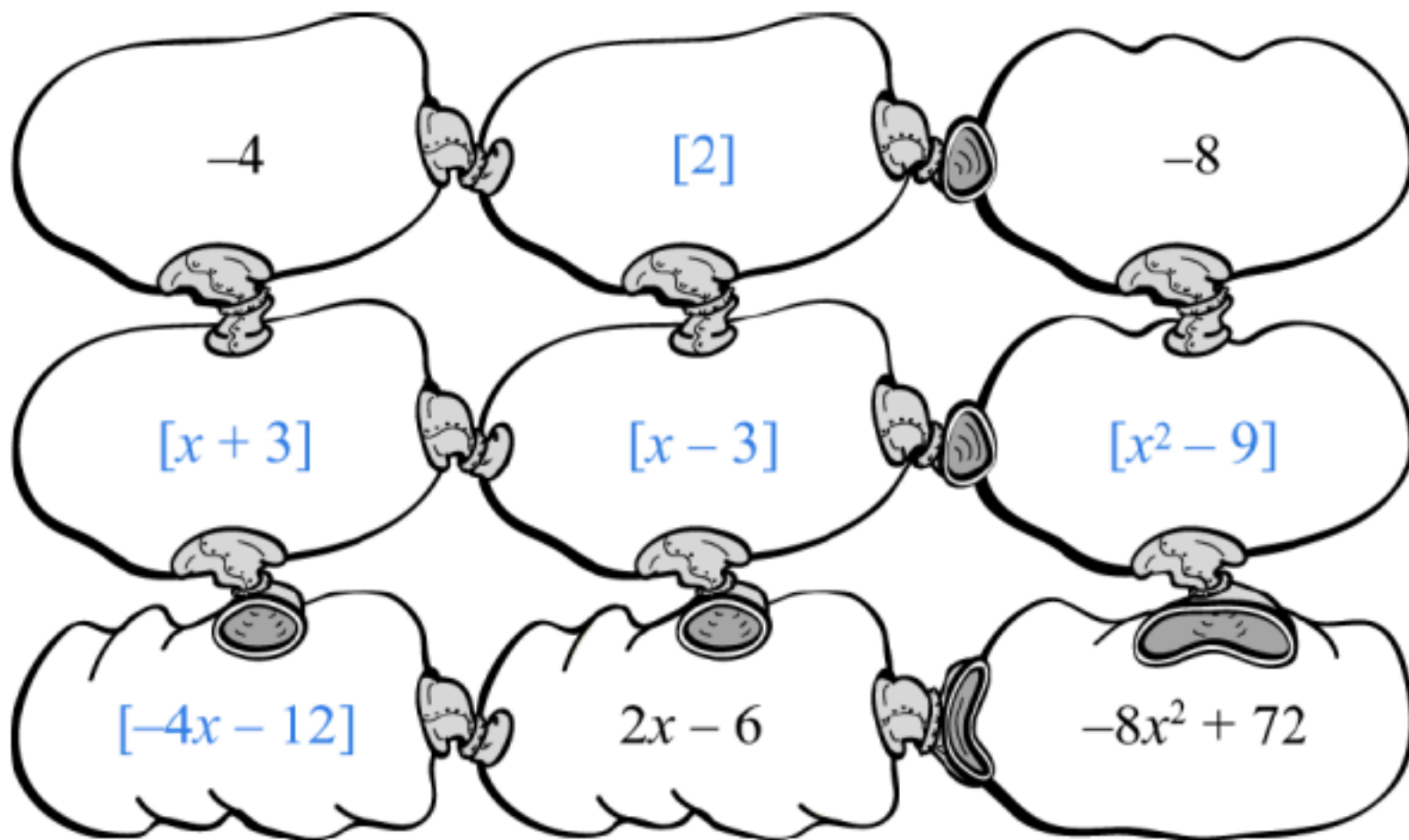
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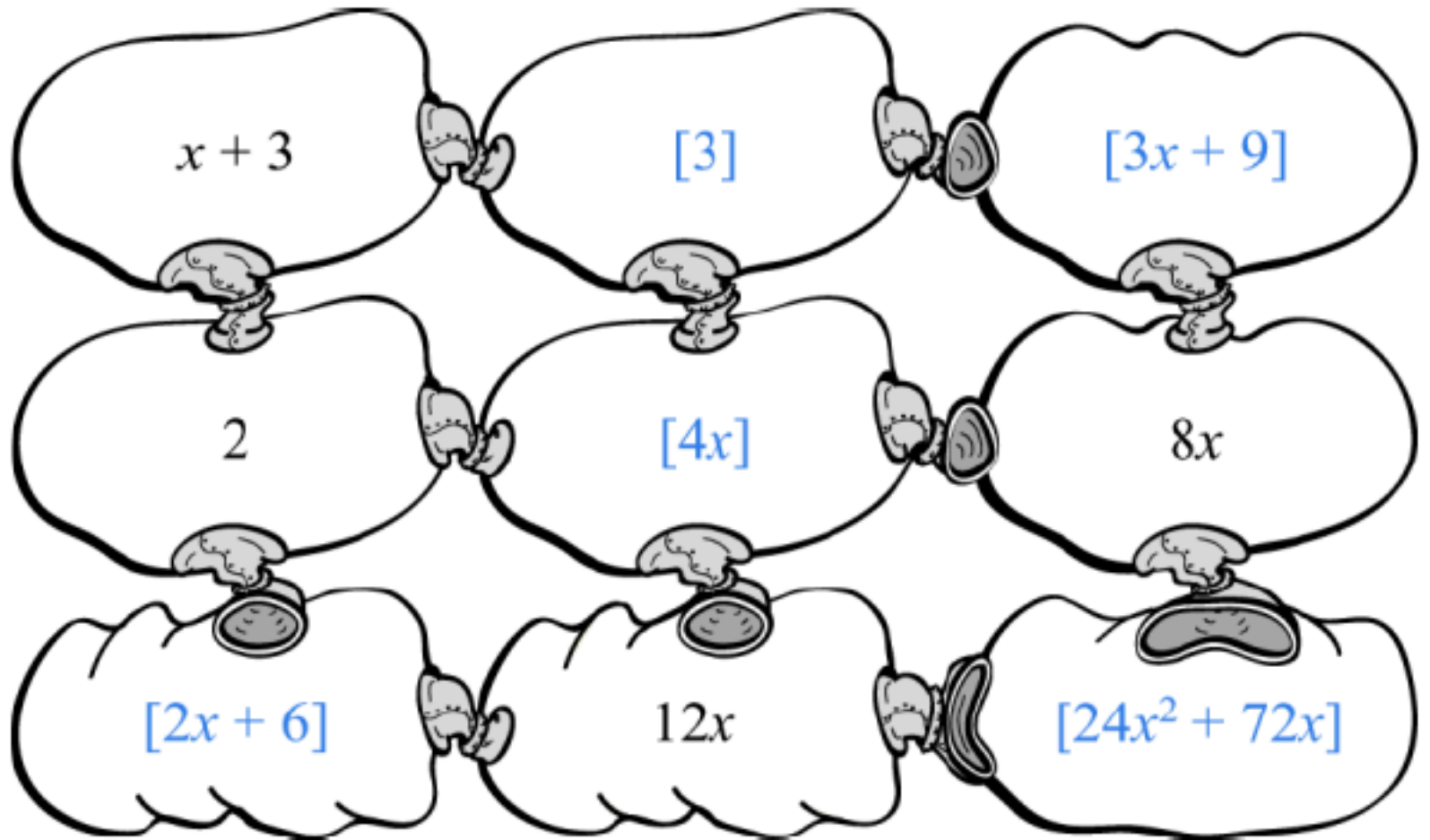
2.



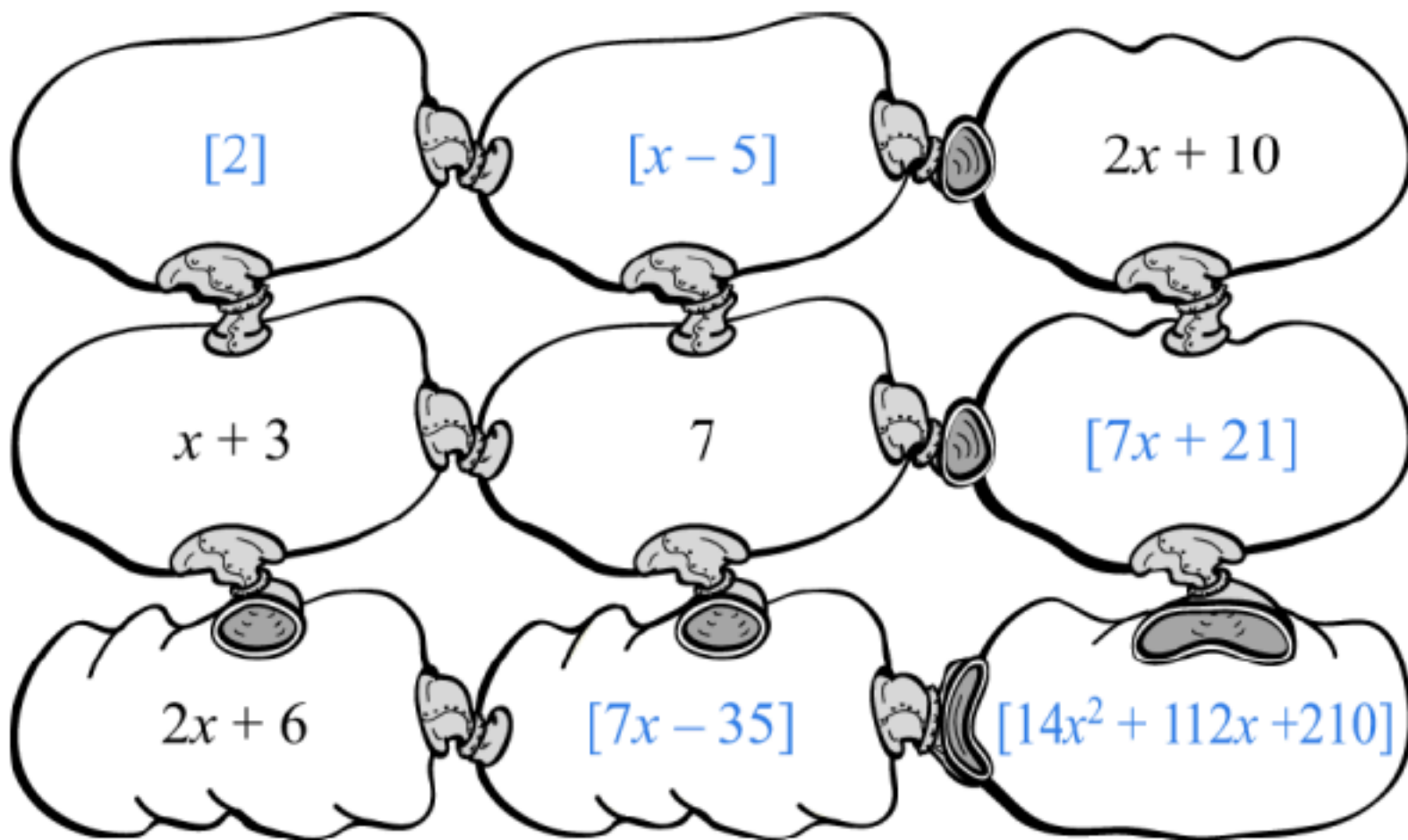
3.



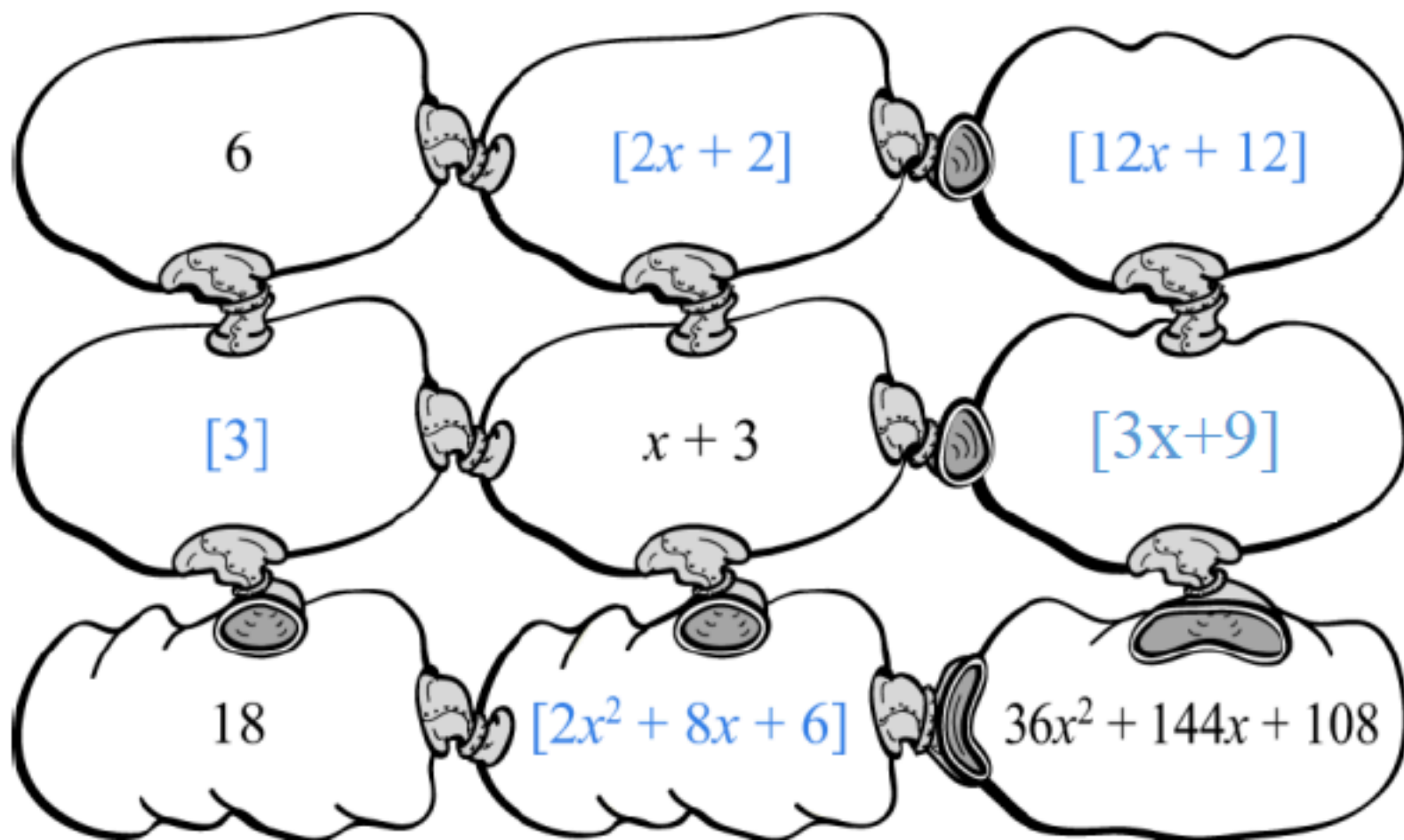
4.



5.



6.



Agenda

- To help review for the test, we will be playing Jeopardy.
- One person from each group will grab a whiteboard to keep score & write your team name
- You will raise the board every time you want to offer an answer
- **NOW, please send one person to pick up a whiteboard for your group**
- **(Pd 6 – Maxwell), please click on the Jeopardy link to the right to begin**

