math Antics Worksheets

Name: _____

Date: _____

Identifying and Combining 'Like' Terms

AB-SP 1

Instructions: For each problem, if the pair of terms shown are 'Like' Terms, then combine them into a single term in the space provided. Otherwise, write "not like" if the terms can't be combined.

1. $4x$ and $6x$ — $10x$
2. $5x$ and $5y$ — not like
3. $2y^2$ and $2y^2$ — $4y^2$
4. x^2 and x^2 — $2x^2$
5. b^2 and $2b^3$ — not like
6. $4x^2$ and $-x^2$ — $3x^2$
7. xy^2 and yx^2 — not like
8. $-x^2$ and $-x^2$ — $-2x^2$
9. $-5b^2$ and $-b^2$ — $-6b^2$
10. $4x^2$ and $-4x^2$ — 0
11. $3ab^2$ and $4ab^2$ — $7ab^2$
12. $4a^2$ and $-a^4$ — not like
13. $-a^4$ and $2y^4$ — not like
14. $10x^2$ and $-7x^2$ — $3x^2$
15. $8y$ and $8y$ — $16y$
16. $4x^2$ and $-x^2$ — $3x^2$
17. $-xy$ and $-2yx$ — $-3xy$
18. $\frac{1}{2}x$ and $\frac{1}{2}x$ — x
19. $6c^2$ and $2c^2$ — $8c^2$
20. $-x$ and $-10x$ — $-11x$
21. $4y^5$ and xy^4 — not like
22. $\frac{1}{3}x$ and $\frac{1}{3}x$ — $\frac{2}{3}x$

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Simplifying Basic Polynomials - Set 1

AB-SP 2

Instructions: Simplify each polynomial below by combining 'like' terms. Do your best to arrange the terms of the simplified polynomial in order from highest to lowest degree.

1. $5x + 10 - 2x + 5$

   $3x + 15$

2. $12x + 10 - 2x - 8$

   $10x + 2$

3. $3x^2 - 4 - 2x^2 + 5$

   $x^2 + 1$

4. $5x + 4y + 7x + y$

   $12x + 5y$

5. $3b + 2b + b + 2$

   $6b + 2$

6. $-3b - 2b - b - 2$

   $-6b - 2$

7. $-y + 7 + y + 3$

   10

8. $3x + 4x^2 - 5x^2 + 1 + 15$

   $-x^2 + 3x + 16$

9. $-x^3 + x^3 + x + 4$

   $x + 4$

10. $-2x^3 + 4x^2 + 9 + x^2$

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

11. $3y^2 - y^2 - 2x^2 + x$

    $2y^2 - 2x^2 + x$

12. $-3ab + 5a + 7ab + 2b$

    $4ab + 5a + 2b$

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Simplifying Basic Polynomials - Set 2

AB-SP 3

Instructions: Simplify each polynomial below by combining 'like' terms. Do your best to arrange the terms of the simplified polynomial in order from highest to lowest degree.

1. $3a + b - 4b + 5a$

   $8a - 3b$

2. $x + 10x + 2y - 8$

   $11x + 2y - 8$

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

   $9x^2 - 4$

4. $3b + a - b + 2a$

   $2b + 3a$

5. $6y^3 - y^3 - 2x^2 + x^2$

   $5y^3 - x^2$

6. $-2y + 2 + 3y + 1$

   $y + 3$

7. $1 + 3x + 4x^2 - 5x + 8$

   $4x^2 - 2x + 9$

8. $12x + 3y + 6x + y$

   $18x + 4y$

9. $-4a^3 + 1 + a^3 + 7a^2$

   $-3a^3 + 7a^2 + 1$

10. $-2 + 35b - 8b - 2b$

    $25b - 2$

11. $-2b + 3ab + a + 9ab$

    $12ab + a - 2b$

12. $-x^3 + 2x + 2x^3 - x + x^2$

    $x^3 + x^2 + x$

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Simplifying Longer Polynomials

AB-SP 4

Instructions: Simplify each polynomial below by combining 'like' terms. Do your best to arrange the terms of the simplified polynomial in order from highest to lowest degree.

1. $5x + 7 - 3x^3 + 5 - x^3$

   $-4x^3 + 5x + 12$

2. $8x^2 + 20 - 2x^2 - 4$

   $6x^2 + 16$

3. $15 + 3y - y + 5y - 1$

   $7y + 14$

4. $-5x + 4y + 7y - 8 + 2x$

   $-3x + 11y - 8$

5. $x + 2x^4 + 9x - 10x^4$

   $-8x^4 + 10x$

6. $-3a - 2ab - a + 2abc$

   $2abc - 2ab - 4a$

7. $24 + b^2 - y + 7b^2 + 2y + 4$

   $8b^2 + y + 28$

8. $3xy + 6 + 4x^5 - 5xy + 9$

   $4x^5 - 2xy + 15$

9. $x^2 + x^3 - x^4 + x - x^3 + x^4$

   $x^2 + x$

10. $-2x^3 + 8x^3 + 9x^3 - x^3$

    $14x^3$

11. $6a^3 - b^2 - 2a^3 + 2c - 2b^2$

    $4a^3 - 3b^2 + 2c$

12. $x^2y + 4xy + 5yx + 2y^2x$

    $x^2y + 2xy^2 + 9xy$

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Simplifying Realy Long Polynomials (optional)

AB-SP 5

Instructions: Simplify each polynomial below by combining 'like' terms. Do your best to arrange the terms of the simplified polynomial in order from highest to lowest degree.

1. $x^2 + 5y - 5 + 8x^3 + 4 + 7y - 4x^2 + 10 - 4x^2$

   $8x^3 - 7x^2 + 12y + 9$

2. $8x - 7x^3 + 14 + 7x - x^2 - 6 - x^3 + 4x^2$

   $-8x^3 + 3x^2 + 15x + 8$

3. $10c + b + 7a - 5c - a + 5b + 4b + 8a - 6c$

   $14a + 10b - c$

4. $28 + x^2 + 7y^2 - 2xy + 3x^2 + 4 + 10xy - 6y^2$

   $4x^2 + y^2 + 8xy + 32$

5. $a + a^2 + 4a^2 - 5a - a^2 + 9a + 8a^2 - a$

   $12a^2 + 4a$

6. $20 + 12x^2 - 5 - 10x + 4x^2 + 8x^3 + x - 7x^3$

   $x^3 + 16x^2 - 9x + 15$