Maths with Melissa

Collecting Like Terms Worksheet

Simplify each of the following expressions by collecting like terms. Show your working where appropriate.

Multiple Choice Questions

- 1. Simplify the expression: 3x + 4x
- a) 7*x*
- b) $12x^2$
- c) x^7
- d) 1x
- 2. What is the simplified form of: 5y 2y + y
- a) 4y
- b) 6y
- c) 8y
- d) 3y
- 3. Which of the following is the result of simplifying 2a + 3b + 4a b?
- a) 6a + 2b
- b) 6a + 4b
- c) 5a + 2b
- d) 2a + 2b
- 4. Simplify: 7m 4n + 2m + 3n
- a) 9m n
- b) 5m + 7n
- c) 9m + n
- d) 7m + 5n

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- 5. What is the simplified form of 6p 3p + 2q q?
- a) 3p + q
- b) 9p + 3q
- c) 3p + q
- d) 6p + 2q

Fill in the Blank Questions

[Word Bank: 5x, 9y, 4z, 11k]

- 1. 2X + 3X =_____
- 2. 4y + 5y =_____
- 3. 7Z 3Z =_____
- 4. 8k + 3k =_____

5.

True/False Questions

- 1. True or False: 2x + 3y can be simplified to 5xy.
- 2. True or False: 4a + 6a = 10a.

Short Answer Questions

- 1. Explain what is meant by "like terms" in algebra.
- 2. Simplify the expression 2x + 4y x + 3y.

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Answer Key

Multiple Choice Answers:

- 1. a) 7*x*
- 2. b) 4y
- 3. a) 6a + 2b
- 4. c) 9m + n
- 5. a) 3p + q

Fill in the Blank Answers:

- 1. 5*x*
- 2. 9*y*
- 3. 4*z*
- 4. 11*k*

True/False Answers:

- 1. False -2x + 3y cannot be combined because they are not like terms.
- 2. True

Short Answer Sample Answers:

- 1. Like terms are terms that have the same variable(s) raised to the same power, and can be combined by adding or subtracting their coefficients.
- 2. 2x + 4y x + 3y = (2x x) + (4y + 3y) = x + 7y