

Master Maths 9 Worksheet 15

Algebraic Terms, Simplification

15

Name: _____

1. Write the following statements as algebraic expressions.

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|--------------------------------|--|
| (a) The sum of A and B | |
| (b) The product of m and n | |
| (c) The sum of $6p$ and $3q$ | |
| (d) 6 more than b | |
| (e) 5 less than x | |
| (f) Half of y | |

2. From the following expressions list all the terms.

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|-------------------------|--|
| (a) $3x^2 + 5xy - 6y^2$ | |
| (b) $7mn + 8pqr - n$ | |

3. Circle all the sets of like terms from the following list. Use a different colour for each set.

xy $3x^2$ $5y^2$ $7xy$ $-x^2$ $3x$ y $-3y^2$
 $x/4$ $12y^2$ $9xy$ $-2x^2$ $15y$ $\frac{1}{4}x$ $-\frac{2}{5}y^2$

4. Write the coefficient of each of the following terms.

- (a) $4x^2$ (b) mnp (c) $-3y^4$ (d) $\frac{3}{4}ab^3$ (e) $H/8$

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5. Simplify the following expressions.

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|-------------------------|--|
| (a) $7a + 6a$ | |
| (b) $3x + x$ | |
| (c) $4b + 6b + 7b - 2b$ | |
| (d) $3x^2 + 8x^2 - x^2$ | |
| (e) $3m - 7m + 8m$ | |
| (f) $-7y - 5y$ | |
| (g) $-2p + 8p - 11p$ | |

6. Simplify the following expressions.

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|--|--|
| (a) $7x + 6y + 3x + 5y$ | |
| (b) $3a + 4b + 8a + 7b$ | |
| (c) $7m + 2n - 3m - n$ | |
| (d) $6c + 5d - 4c - 9d$ | |
| (e) $5x^2 + 2y^2 - 5x^2 - 3y^2$ | |
| (f) $-3m + 5n - 6m - n$ | |
| (g) $6x - y - 11x - 3y$ | |
| (h) $-2a + 5b - 4a + b - a - 12b + 4a + 3a + 7b$ | |
| (i) $5xy + 7yx + 3xy - 5yx$ | |
| (j) $-2ab^2 + a^2b - 3b^2a + ba^2$ | |
| (k) $6m^2n + 2mn^2 + 3nm^2 - 5n^2m - 3m^2n + m^2n$ | |

7. Simplify the following expressions.

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|---|--|
| (a) $3a \times 4b$ | |
| (b) $2m \times 6n \times p$ | |
| (c) $3y \times 5x \times 2z$ | |
| (d) $4bc \times 6a$ | |
| (e) $2s \times 3r \times p \times 10q$ | |
| (f) $2abc \times 5a \times 3c$ | |
| (g) $2y \times 3x \times 5z \times x \times yz$ | |

8. Find the perimeter and area of this rectangle.

