# Year 7 collecting like terms worksheet

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Name: _____ Date: _____

**Question 1**

Simplify 5a + 3b - 2a + b.

Answer: _____

**Question 2**

Simplify 4xy + 3x - xy + 7 - x.

Answer: _____

**Question 3**

A triangle has side lengths 3m + 2, 2m + 5 and m - 1 centimetres.

(a) Write a simplified expression for the perimeter.

(b) Find the perimeter when m = 4.

Answer: _____

**Question 4**

Simplify 7m - 3n + 2m + 8n.

Answer: _____

**Question 5**

Simplify 3a + 5a.

Answer: _____

**Question 6**

Simplify 6x + 4y - 2x + 3y.

Answer: _____

# Year 7 collecting like terms: answers and worked solutions

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**Question 1**

**Key idea:** Like terms have exactly the same pronumerals; only like terms can be added or subtracted.

1. Group like terms: 5a - 2a + 3b + b 2. 5a - 2a = 3a and 3b + b = 4b 3. Result: 3a + 4b

**Answer:** 3a + 4b

**Question 2**

**Key idea:** xy terms, x terms and constants are three different kinds of term.

1. xy terms: 4xy - xy = 3xy 2. x terms: 3x - x = 2x 3. Constant: 7 4. Result: 3xy + 2x + 7

**Answer:** 3xy + 2x + 7

**Question 3**

**Key idea:** Add the three sides, then collect like terms.

1. (a) (3m + 2) + (2m + 5) + (m - 1) 2. (a) m terms: 3m + 2m + m = 6m; constants: 2 + 5 - 1 = 6 3. (a) Perimeter = 6m + 6 4. (b) 6 × 4 + 6 = 30 5. (b) Check with the sides: 14 + 13 + 3 = 30 ✓

**Answer:** (a) 6m + 6 cm (b) 30 cm

**Question 4**

**Key idea:** Only like terms can be added or subtracted.

1. 7m + 2m = 9m 2. -3n + 8n = 5n

**Answer:** 9m + 5n

**Question 5**

**Answer:** 8a

**Question 6**

**Answer:** 4x + 7y