

## Collecting Like Terms

Please write clearly in block capitals

Forename:

Surname:

### Materials

For this paper you must have:

- mathematical instruments



You **can** use a calculator.

### Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

### Information

- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

### Advice

- In all calculations, show clearly how you work out your answer.

1 Write the following expressions in their simplest form:

1(a)

$$a + 2a + 3a$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

1(b)

$$3b + 4b + 5b + 3b$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

1(c)

$$4c + 7c + 5c + 2c$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

1(d)

$$6d + 4d + 3d + 6d$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

1(e)

$$9i + 10i + 7i$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

Turn over for next question

**2** Write the following expressions in their simplest form:

**2(a)**

$$a - 2a + 3a$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

**2(b)**

$$3b + 4b + 5b - 3b$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

**2(c)**

$$4c + 7c - 5c + 2c$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

**2(d)**

$$6d - 4d + 3d + 6d$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

**2(e)**

$$9i + 10i - 7i$$

[1 mark]

\_\_\_\_\_

Answer \_\_\_\_\_

**Turn over for next question**

Turn over ►

**3** Write the following expressions in their simplest form:

**3(a)**  $a + 5a - 3a + 4b + 3b$

[1 mark]

Answer \_\_\_\_\_

**3(b)**  $5c + 6c + 4d + 3d$

[1 mark]

Answer \_\_\_\_\_

**3(c)**  $7e - 5e + 4e - 5f + 8f + 2f$

[1 mark]

Answer \_\_\_\_\_

**3(d)**  $6k + 8l - 4k - 2k + 10l$

[1 mark]

Answer \_\_\_\_\_

**3(e)**  $9u - 7t + 2u - 11u + 7t$

[1 mark]

Answer \_\_\_\_\_

Turn over for next question

4 Write the following expressions in their simplest form:

4(a)  $6x + 3x - 2x + 10$

[1 mark]

Answer \_\_\_\_\_

4(b)  $11x - 20x + 10 + 20$

[1 mark]

Answer \_\_\_\_\_

4(c)  $-3x - 6x - 4 - 3x$

[1 mark]

Answer \_\_\_\_\_

4(d)  $3x + 4y + 2x + 6y + 10$

[1 mark]

Answer \_\_\_\_\_

4(e)  $-4x + 10y + 4x - 5y + 20 - 1$

[1 mark]

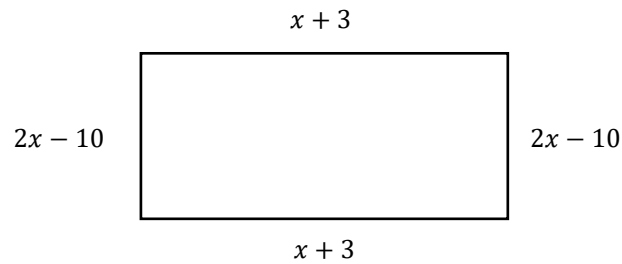
Answer \_\_\_\_\_

Turn over for next question

Turn over ►

- 5 For the following shapes, write an expression, in its simplest form, for the perimeter of the shape.

5(a)



[2 marks]

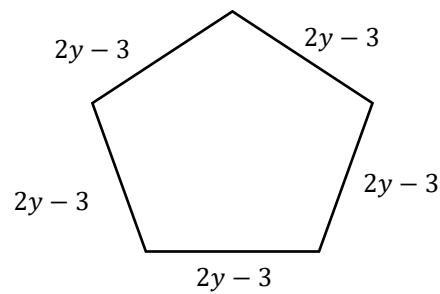
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Answer \_\_\_\_\_

5(b)



[2 marks]

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Answer \_\_\_\_\_

**End of Questions**