

Name:

Date:

Simplifying Algebra (Collecting Like Terms)

GCSE

Edexcel

Mathematics

Grade (9-1)

Mark

Score (%)

$\frac{\quad}{57}$	
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Materials

For this paper you must have:

- Ruler
- Pencil, Rubber, Protractor and Compass
- Scientific calculator, which you are expected to use when appropriate

Instructions

- Answer all questions
- Answer questions in the space provided
- All working must be shown
- Do all rough work in this book. Cross out any rough work you don't want to be marked

Information

- The marks for the questions are shown in brackets

1 (a) Simplify $n + n + n$

.....

(1)

(b) Simplify $3x + 3x$

.....

(1)

(c) Simplify $f + f + f + f + f$

.....

(1)

(Total for question 1 is 3 marks)

2 (a) Simplify $3x + 4x - 2x$

.....

(1)

(b) Simplify $7x + 3x - 5x$

.....

(1)

(c) Simplify $5a + 3b + 2a$

.....

(1)

(Total for question 2 is 3 marks)

3 (a) Simplify $4 \times 3x$

.....

(1)

(b) Simplify $12a - 3a + 6a$

.....

(1)

(Total for question 3 is 2 marks)

4 (a) Simplify $a \times b \times c$

.....

(1)

(b) Simplify $5f - 2f$

.....

(1)

(c) Simplify $\frac{8h}{2}$

.....

(1)

(Total for question 4 is 3 marks)

5 (a) Simplify $5 \times 5z$

.....

(1)

(b) Simplify $7a - 3a + 6a$

.....

(1)

(c) Simplify $4 \times b \times 9$

.....

(1)

(Total for question 5 is 3 marks)

6 (a) Simplify $k + k + 8$

.....

(1)

(b) Simplify $5x + 12 + x + 2$

.....

(1)

(Total for question 6 is 2 marks)

7 (a) Simplify $k \times k \times k$

.....

(1)

(b) Simplify $2p \times p$

.....

(1)

(c) Simplify $3p \times 3p$

.....

(1)

(Total for question 7 is 3 marks)

8 (a) Simplify $8c + 3d - c + 2d$

.....

(1)

(b) Simplify $11c - 8d + 5c - d$

.....

(1)

(c) Simplify $3x + 2y + 6x - y$

.....

(1)

(Total for question 8 is 3 marks)

9 (a) Simplify $4ac + 5ac$

.....

(1)

(b) Simplify $a^2 + a^2$

.....

(1)

(c) Simplify $5y^2 + 2w^2 + y^2 - w^2$

.....

(1)

(Total for question 9 is 3 marks)

10 (a) Simplify $\frac{2y + 6y}{2}$

.....

(1)

(b) Simplify $\frac{7x + 5x}{4}$

.....

(1)

(c) Simplify $\frac{10d}{d}$

.....

(1)

(Total for question 10 is 3 marks)

11 (a) Simplify $2t \times 7s$

.....

(1)

(b) Simplify $2 \times n \times 6 \times m$

.....

(1)

(c) Simplify $2rs - 5rs + 4rs$

.....

(1)

(d) Simplify $3xy + 2xy - xy$

.....

(1)

(Total for question 11 is 4 marks)

12 (a) Simplify $3cd + 4ab + 7cd + ab$

.....

(1)

(b) Simplify $12y^2 + 5ab + 7y^2 - ab$

.....

(1)

(Total for question 12 is 2 marks)

13 (a) Simplify $(12 \times y) + (2x \times 2) - (4y \times 2)$

.....

(b) Simplify $(6 \times 3y) - (4x \times 2) - (4y \times 2) - (9x \times 2)$

(2)

.....

(c) Simplify $12ax + 2 + 3by - ax + 3by + 6$

(2)

.....

(2)

(Total for question 13 is 6 marks)

14 (a) Simplify $9e \times 2e + 3p \times 2p - 2e^2 + 6$

.....

(b) Simplify $12k \times 2 + 4t \times 3 - 4k \times 3 - 3 \times 2t$

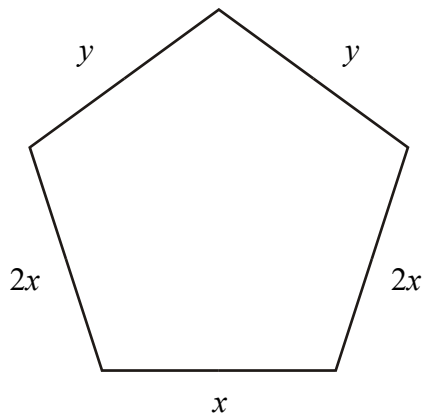
(3)

.....

(3)

(Total for question 14 is 6 marks)

15

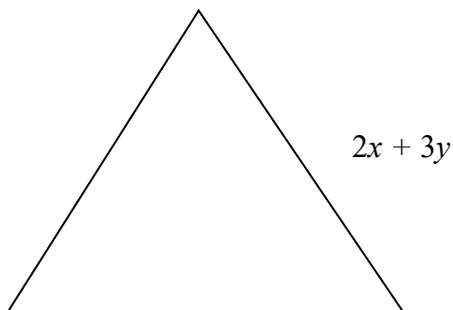


Shown above is a pentagon.

Find an expression, in terms of x and y , for the perimeter of the pentagon.

.....
(Total for question 15 is 3 marks)

16

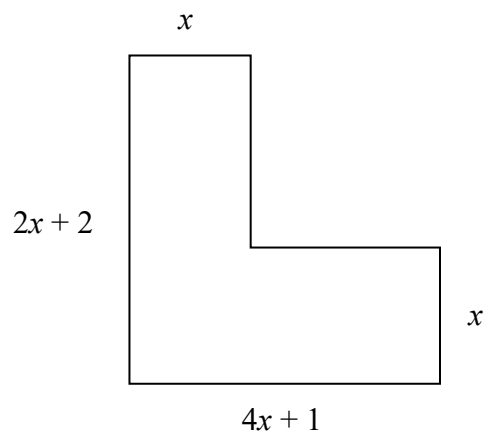


Shown above is an equilateral triangle.

Find an expression, in terms of x and y , for the perimeter of the triangle..

.....
(Total for question 16 is 3 marks)

17



Find an expression, in terms of x and y , for the perimeter of this shape.

.....
(Total for question 17 is 5 marks)