

Simplify / Expand & Simplify (F)

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

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Total Marks:	

1. Show that $4(a + 3) - 3(a - 2) = a + 18$.

$$\begin{aligned} & \overset{\times}{\curvearrowright} \quad \overset{\times}{\curvearrowright} \\ & 4a + 12 - 3a + 6 \\ & = a + 18 \end{aligned}$$

[2]

2. Simplify.

$$a \times a \times a \times a \times a$$

$$a^5$$

[1]

3. Simplify fully.

$$4x + 3y - 2 + 2x - 8y - 6$$

$$6x - 5y - 8$$

[2]

4. Simplify $5a - (2a + 6)$ $5a - 2a - 6$

Circle your answer.

$$3a + 6$$

$$9a$$

$$- 3a$$

$$3a - 6$$

[1]

5. Expand and simplify $(m + 7)(m + 3)$

$$m^2 + 3m + 7m + 21$$

$$m^2 + 10m + 21$$

[1]

6. Simplify $8x - 3x + 2x$

$$7x$$

[1]

(b) Simplify $4y \times 2y$

$$8y^2 \dots\dots\dots [1]$$

7. (a) Simplify $(t^3)^2$

$$t^6 \dots\dots\dots [1]$$

(b) Simplify $\frac{w^9}{w^4}$

$$w^5 \dots\dots\dots [1]$$

8. Simplify $x + x + y \times y$

$$2x + y^2 \dots\dots\dots [1]$$

9. Simplify $7x + 5 - 8 - 3x$

Circle your answer.

[1]

x

$4x + 3$

$4x - 3$

$10x - 3$

10. Simplify $6w - 5x - 4w - 2x$

$$2w - 7x$$

[2]

11. (a) $7a + 3b + 2a + 5b$

$$9a + 8b$$

[2]

(b) $3(y - 2)$

$$3y - 6$$

[1]

(c) $3y \times 2y$

$$6y^2$$

[1]

(d) $\frac{y^6}{y^2}$

y^4

[1]

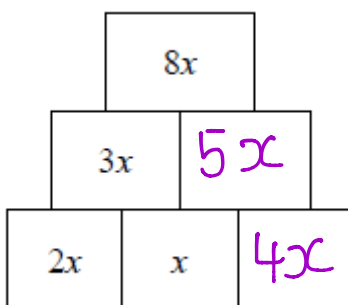
12. To fill in a block, you must add the values on the two blocks directly below it.

Some values are already displayed.

Fill in the empty blocks.

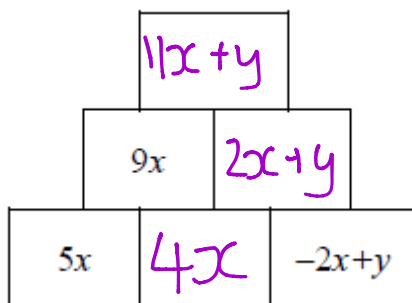
You must simplify your answer.

(a)



[2]

(b)



[3]

13. Simplify $7x + 2y - 3x + 4y$

$4x + 6y$

[2]

14. Expand and simplify $3(y - 2) + 5(2y + 1)$

$3y - 6 + 10y + 5$
 $= 13y - 1$

[2]

15. (a) Simplify $5f - f + 2f$

$6f$ [1]

(b) Simplify $2 \times m \times n \times 8$

$16mn$ [1]

(c) Simplify $t^2 + t^2$

$2t^2$ [1]

16. Simplify $(m^3)^2$

m^6 [1]

17. Simplify $d^2 \times d^2$

d^4 [1]

18. Circle the expression that can be written as $2y^2$

[1]

$(2y)^2$

$2 \times 2 \times y$

$2 \times y \times y$

$2 \times 2 \times y \times y$

19. Simplify $7a + 5b + 3a - 2b$

$10a + 3b$

[2]

CREDITS AND NOTES

Question	Awarding Body	Question	Awarding Body
1	OCR	13	Pearson Edexcel
2	OCR	14	Pearson Edexcel
3	OCR	15	Pearson Edexcel
4	AQA	16	Pearson Edexcel
5	Pearson Edexcel	17	Pearson Edexcel
6	Pearson Edexcel	18	AQA
7	Pearson Edexcel	19	AQA
8	AQA		
9	AQA		
10	AQA		
11	WJEC Eduqas		
12	WJEC Eduqas		

Notes:

These questions have been retyped from the original sample/specimen assessment materials and whilst every effort has been made to ensure there are no errors, any that do appear are mine and not the exam board's (similarly any errors I have corrected from the originals are also my corrections and not theirs!).

Please also note that the layout in terms of fonts, answer lines and space given to each question does not reflect the actual papers to save space.

These questions have been collated by me as the basis for a GCSE working party set up by the GLOW maths hub - if you want to get involved please get in touch. The objective is to provide support to fellow teachers and to give you a flavour of how different topics "could" be examined. They should not be used to form a decision as to which board to use. There is no guarantee that a topic will or won't appear in the "live" papers from a specific exam board or that examination of a topic will be as shown in these questions.

Links:

AQA <http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300>

OCR <http://ocr.org.uk/gcsemaths>

Pearson Edexcel <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

WJEC Eduqas <http://www.eduqas.co.uk/qualifications/mathematics/gcse/>

Contents:

This version contains questions from:

AQA – Sample Assessment Material, Practice set 1 and Practice set 2

OCR – Sample Assessment Material and Practice set 1

Pearson Edexcel – Sample Assessment Material, Specimen set 1 and Specimen set 2.

WJEC Eduqas – Sample Assessment Material

