



Aberdare Community School
Mathematics Department

WJEC GCSE
Higher – Non Calculator
Algebra

Change the subject of a formula

Name:

Set:

Date:

Teacher:

19. (a) Make x the subject of the formula

$$5(x + y) = 8y + 5.$$

.....

.....

.....

.....

.....

.....

[3]

- (b) Make k the subject of the formula

$$5(2k - m) = ck + 5.$$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]

18. (a) Make x the subject of the formula

$$x^2 + 3y = 8y + 13.$$

.....

.....

.....

.....

.....

.....

[3]

19. Make h the subject of the formula

$$10(h - 2e) = 7(h - k).$$

.....

.....

.....

.....

.....

[3]

21. Make e the subject of the following formula.

$$10b + 5be = 3e + 7c$$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[3]

10. (a) Make r the subject of the following formula.

$$V = \frac{4\pi r^3}{3}$$

.....

.....

.....

.....

[3]

- (b) Make d the subject of the following formula.

$$de - c = 2d + g$$

.....

.....

.....

.....

.....

[3]

7.

(c) Make g the subject of the formula $t = 5g - 8$.

.....

.....

.....

[2]

18. (a) Make x the subject of the formula

$$5(x + y) = 8y + 5.$$

.....

.....

.....

.....

.....

.....

[3]

- (b) Make k the subject of the formula

$$5(2k - m) = ck + 5.$$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]

8.

(c) Make w the subject of the following formula.

$$6(w + y) = 10y - 7$$

.....

.....

.....

.....

[3]

(c) Make y the subject of the formula $3y - 4 = h$.

.....

.....

.....

9. (a) Make x the subject of the formula $ax - g = bx + h$.

.....

.....

.....

.....

.....

.....

[3]

(c) Make t the subject of the formula $3t = d(5 - t)$.

.....

.....

.....

.....

.....

[4]



9. Rearrange the following to make r the subject of the formula

$$A = \frac{4\pi r^2}{3}.$$

.....

.....

.....

.....

.....

.....

(c) Make g the subject of the formula $3g^2 - f = 0$.

.....

.....

.....

.....

.....

.....

.....

[3]

4352
0200/05



7. Make b the subject of the following formula

$$bc = bd + e$$

.....

.....

.....

.....

.....

.....

.....

[3]

11.

(b) Make x the subject of the following formula.

$$\frac{ax + b}{cx + d} = 2$$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[5]

3. (a) Make q the subject of the following formula.

$$3q + h^2 = m$$

.....

.....

.....

[2]

[2]



10. Rearrange the following formulae to make y the subject.

(a) $y^2 - t = g$

.....

.....

.....

.....

.....

[2]

(b) $\frac{3y + w}{2y + 3} = 5$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]



11. (a) Rearrange the following to make t the subject of the formula

$$3(t - g) = h(f - t).$$

.....

.....

.....

.....

.....

.....

.....

.....

[4]

7. (a) Kirra needs to write a formula in a spreadsheet.
She needs a formula for g in terms of f .

Kirra knows that $f = 5 + 3g^2$.

Rearrange to make g the subject of the formula.

.....

.....

.....

.....

.....

.....

[3]



(c) Make e the subject of the following formula.

[4]

Examiner
only

$$\frac{d(2+e)}{5-e} = 3$$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

12.

(b) Rearrange to make m the subject of the following formula.

[3]

$$w = \frac{3m^2}{d}$$

.....

.....

.....

.....

.....

.....

(c) Rearrange to make b the subject of the following formula.

[3]

$$ab = bc + e$$

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

13. Make p the subject of the following formula.

[3]

Examiner
only

$$t + 6p = 5 - pq$$

.....

.....

.....

.....

.....

.....

.....

5. (a) Make e the subject of the following formula.

[2]

Examiner
only

$$h = 5e - 4$$

.....

.....

.....

12.

(b) Make w the subject of the following formula.

[3]

$$\frac{w^2 + x^2}{4} = 1$$

.....

.....

.....

.....

.....

.....

